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TEACHING AND LEARNING: THE QUALITY IMPERATIVE REVISITED

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Abstract. The 2014 EFA Global Monitoring Report (GMR) is the second with 'quality' in its title and the first whose title highlights teaching and learning. GMR 2014 assesses progress towards the six EFA goals with particular reference to the quality of teachers and teaching, but this conference keynote considers progress within the discourse and methodology of the global monitoring process itself. It does so by revisiting GMRs 2002 and 2005 and the author's earlier (2008) critique, concentrating on the way that quality, teaching and learning have been defined, conceptualised, indicated and measured. EFA indicators can attend to only a limited range of variables and proxies are inevitable; yet it remains essential to ask – especially with the post-2015 EFA agenda in mind – whether what is truly transformative in teaching and learning is adequately captured in the EFA monitoring process, the literature on which it draws, and the recommendations it produces. The paper argues for a more radical and creative approach to the defining and use of indicators and argues that despite pedagogy's pivotal role in generating educational quality, it remains the missing GMR ingredient. The problem is both conceptual and evidential, and the paper argues for a more inclusive, less top-down use of the available research in order to bring into EFA and GMR discourse evidence on teaching and learning that can really make a difference.

Like its predecessors, the new Global Monitoring Report *Teaching and Learning: achieving quality for all* - which from now on I'll refer to as GMR 2014[1] – is an impressive document in the scale of its evidence, the progress it documents, the warnings it issues, and the profound humanity of its endeavour.

The title of GMR 2014 reminds us that quality has been an EFA goal since the 2000 Dakar framework declared it to be 'at the heart of education' and a fundamental determinant of student enrolment, retention and achievement;[2] while, along with quality, learning featured a decade earlier in no fewer than three of the six Jomtien goals.[3] Yet despite this emphasis, quality in the global monitoring reports, and quality in teaching and learning in particular, have remained surprisingly elusive. To some extent this has reflected an inevitable preoccupation with those other EFA goals whose urgency seems the more pressing because their progress is readily computed. With 57 million children still out of primary school, half of them in the 32 countries suffering conflict, and only 13 out of 90 countries likely to achieve universal primary school completion by 2015 we understand why this is so. Numbers make headlines. 'Quality' does not.

Paradoxically, quality is also elusive because it is ubiquitous. For instance, a consistent argument in the GMRs has been the inseparability of quality from equity, because until an education system is equitable in terms of access, enrolment, gender parity, retention and completion it can hardly be described as being of good quality, even if for some children, in

1 UNESCO (2014) (Hereafter GMR 2014).
2 UNESCO (2000)
3 UNESCO (1990)

some schools, the experience of learning is rewarding and high standards are achieved. We are justifiably disturbed by the finding of GMR 2014 that while the richest boys may on present trends achieve universal primary education by 2021, the poorest girls will not catch up until 2086. Quality for some is not education for all.

So quality – and equity - pervade all six EFA goals[4]. Indeed, the first GMR called quality a 'composite goal' and one of the strengths of these annual reports is that though each of them has had a specific theme – gender, literacy, early childhood, governance, the marginalized, conflict, quality, inequality – each has begun by tracking progress towards all six goals as a reminder of the way they are intertwined and must be simultaneously pursued if EFA is to be achieved.[5]

But the challenge of quality is not just that it is pervasive and therefore elusive. There is also the methodological question of how EFA Goal 6 – quality of education – has been handled in the monitoring process itself, the way this 'composite' goal has been defined, the indicators by which it has been represented and measured, and the assumptions about the nature and processes of education in which the monitoring of quality has been embedded.

So it is good that GMR 2014 has returned to the theme of quality, first investigated in depth in GMR 2005 *The Quality Imperative*. If, as GMR 2014 says, 774 million of the world's adults are illiterate – another headline finding sharpened by numbers - then the quality of their education is unquestionably an issue. All the more reason, then, as UNESCO looks towards GMR 2015 and beyond, that we should ask three basic questions:

- Does the account of quality in EFA attend to what in teaching and learning really matters?
- Are the classroom processes and outcomes that are truly transformative for our children adequately captured in the EFA goals, objectives and targets, the EFA monitoring indicators and measures, and the evidence on which EFA thinking and policy draw?
- If not, what are the implications for EFA after 2015, and if learning is to be a target, how should it be defined, indicated and assessed?

These are big questions, and I pose them not in the hope of answering them but in the expectation that those closest to EFA and GMR decision-making will be prompted to do so. Incidentally, the sessions that follow this one prompt the same questions. Does assessment in EFA attend to what really matters? Does teacher education? Do school improvement policies?

I shall start by returning to an analysis I was invited to undertake for the UK Department for International Development (DfID) in 2007[6] during a period when I was making frequent visits to India in connection with the Government of India's ambitious EFA initiative, Sarva Shiksha Abhiyan (SSA), and its predecessor the District Primary Education Programme (DPEP). At this point you'll understand my choice of title for this presentation: in the sense that it re-engages with quality, teaching and learning, GMR 2014 revisits GMR 2005, *The Quality Imperative;*[7] and this first revisiting allows a second, prompting me to reassess my earlier concerns about how quality, teaching and learning have been handled in the GMRs.

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4 The EFA goals are: (1) Early childhood care and education; (2) Universal primary education; (3) Youth and adult skills; (4) Adult literacy; (5) Gender parity and equity; (6) Quality of education.

5 The ten previous GMRs, from 2002-12, are listed on p (iv) of GMR 2014.

6 Alexander (2008)

7 UNESCO (2004) (hereafter GMR 2005)

One of those concerns was the relative neglect of pedagogy despite the fact that pedagogy is surely at the very heart of education, and without pedagogy discussions of educational quality are incomplete. Another was the gulf that I found between the evidence on both quality and pedagogy cited in the EFA GMRs and the much larger body of evidence available elsewhere: one world but two utterly different discourses. To counter these tendencies I shall end my presentation with an example from pedagogy showing what the EFA movement could gain if it were to foster a more inclusive discourse and consult a less exclusive literature.

Here, in brief, are some of the problems I identified when I examined EFA and contingent literatures on quality published up to 2007.

- The quest for indicators and measures of quality has produced an understandable preoccupation with *input* and *output* – pupil/teacher ratio, balance of male and female teachers, balance of trained and untrained teachers, expenditure per pupil as percent of GDP, net enrolment ratio, adult literacy rate, survival rate to grade 5 – but this has been at the expense of indicators of *process.* Output is in part determined by process but it does not define it.

- When attempts have been made to plug the gap, the identified process elements appear to have reflected not teaching and learning in the round as experienced by teachers and learners but those few disconnected aspects of classroom life that are regarded as measurable, regardless of whether they have the significance that their selection implies. Hence the foregrounding of learning time, time on task and class size, for example.

- The very act of isolating such aspects validates them in the eyes of those who have the money and power to make them matter – governments, administrators, donors - and sets in train policies for embedding them ever more exclusively, whether or not this prioritisation in justified by the evidence. In this way, the monitoring may distort both what it monitors and the decisions and interventions to which it leads. By way of illustration of the risky consequences of this approach we might note that in Lockheed's and Verspoor's influential 1991 World Bank cost-benefit analysis of investments for improving primary education in developing countries, pre-service teacher education and midday meals were rejected as 'blind alleys'.[8] Today we take a very different view of the efficacy of both interventions.

- In an attempt to engage more comprehensively with process, some frameworks have posited unashamedly qualitative variables such as 'high expectations', 'strong leadership', 'positive teacher attitudes', 'appropriate use of language', 'committed and motivated teachers', 'appropriate teaching and learning materials', 'meaningful assessment', 'effective management of physical assets' and the ubiquitous 'active teaching methods' and 'child-friendly environment'.[9] But each of these modifiers – high, strong, positive, appropriate, committed, meaningful, effective, active, child-friendly - lacks objective meaning and is open to many interpretations, not just across cultures but also within them, while the overall selection is no less arbitrary despite its abundance of adjectives.

- In the absence of watertight measures, compensatory use is made of proxies. 'Survival rate to grade 5', as the proxy indicator of quality in the EFA Education Development

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8 Lockheed and Verspoor (1991), 87.

9 Alexander (2008a), 3-6.

> Index (EDI), is a prominent example.[10] This approach is not confined to EFA. Many governments, and certainly the world's media, treat the performance of a sample of 15 year olds in the PISA tests at a single moment in their educational journey as a valid and reliable measure of the performance of entire education systems. Some proxy!

(As a not entirely flippant aside I confess to finding the use of 'survival' in this context both odd and ambiguous. 'Survival' allows two very different takes, one of them suggesting that education is to be endured rather than enjoyed: (i) 'How good was your education?' 'Excellent: I survived to grade 5.' (ii) 'How good was your education?' 'Terrible: I survived to grade 5 but then could take no more and left school.')

This brings me to three overarching problems identified in my earlier analysis.

First, there has been a lack of precision in the use of the word 'quality' itself. Though 'quality' is often used quasi-adjectively, as in 'quality healthcare', 'quality teaching', 'quality learning' and so on, it is actually a noun. The adjectival use of 'quality', as in 'quality education - is no more than a slogan, offering no purchase on what quality actually is. But even when used as a noun, 'quality' is multi-faceted, for it can mean an attribute – as in 'the qualities we look for in a teacher' – or a degree of excellence, as when we say teaching is of outstanding quality, in which case 'outstanding' needs to be defined. So 'quality' - as in *Teaching and Learning: quality for all* - can describe, prescribe or evaluate.

In the debate about quality in EFA this basic distinction has too often been blurred. That is to say, some have been happy to use supposed indicators of quality in teaching and learning – quality in the sense of a standard to aim for – without adequately exploring and describing those qualities or attributes of which teaching and learning are actually constituted. When we favour prescription over description we risk producing a prospectus for quality which may be arbitrary, incomplete or biased. So I suggest that the task of improving the quality of teaching and learning requires closer attention to the description and analysis of quality and rather less to soundbites like 'child-friendly teaching' and 'active learning.' I suspect that if I were to ask you to define these two well-worn attributes any consensus would be drowned out by noisy disagreement.

The second overarching problem is a confusion between *indicators* and *measures*. The terms are frequently treated as interchangeable when they are not. A measure is a procedure, device or unit for measuring and is irrevocably tied to quantity. An indicator is a more complex and variable clue about whether something is happening and if so to what extent. Approaching clouds indicate the imminence of rain but they don't guarantee it and they certainly don't measure rainfall. A noisy classroom may indicate lack of student concentration but it doesn't conclusively prove it, still less measure the precise balance of student attention and inattention; indeed, there are those who say that a noisy classroom indicates active learning, but that's another story. Time on task, a popular measure of learning in some quarters, is actually no more than an indicator and a pretty unreliable one at that, for it depends on an inferential response to children's visible behaviour. A child who appears to be attending closely to the teacher, and hence 'on task', may in reality be day-dreaming. That's why Nate Gage called time on task a 'psychologically empty quantitative concept.'[11]

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10 UNESCO (2007)

11 Gage, N. (1978), 75. For a cross-national and cross-cultural discussion of time as a far from objective pedagogical 'indicator', see Alexander (2001), 391-426.

The indicators problem is exacerbated when we note that while much in teaching and learning can be indicated, much less can be measured. Now I accept that national education systems, and international education efforts such as EFA, entail massive expenditure and huge populations and therefore cannot be content with high-inference indicators and require measures and data that are as precise as possible. But if this legitimate quest for hard data excludes what is profoundly important then we have a problem.

What do we do about this? I believe that we should sharpen the distinction between indicators and measures, treating the identification of indicators as the first step in the formulation of measures. Since we know that in pursuing quality in education much that can be indicated cannot be measured, we should not arbitrarily exclude such attributes or grasp at proxies which may be conveniently measurable but barely relevant. Instead, we should leave the un-measurable indicators in place. We should develop and refine them *in their own terms* as qualitative devices for making qualitative judgements; and we should look for appropriate ways of using them to support our tasks of monitoring, development and improvement. I'd like to hear a much more radical and creative discussion of EFA indicators than the GMRs have so far provided; one that proceeds from the 'quality imperative' of teaching and learning as they irreducibly are rather than that of numerical convenience. Hard data are not necessarily useful data.

The task I've outlined applies as much to the assessment of the learning of individual children as to the monitoring of schools and education systems. We can measure children's mathematical attainment and certain aspects of their basic literacy development. However, GMR 2014 argues, and its argument is welcome, that while the so-called basics are essential, the fractured nature of our world and the tragedies of poverty and conflict require schools to promote a global citizenship that addresses

> issues such as environmental sustainability and peace-building - which require core transferable skills such as critical thinking, communication, co-operation, problem-solving, conflict-resolution, leadership and advocacy – and the promotion of core values such as tolerance, appreciation of diversity and civic responsibility.[12]

Here we are firmly in the territory of non-measurable indicators. So we must find other ways of describing and assessing children's learning in this vital area. A single testable target or indicator for 'learning' across the board - as is proposed for EFA post-2015 - may not suffice, unless it can be proved that, say, numeracy correlates with tolerance, appreciation of diversity and civic responsibility. Actually, this isn't as far-fetched as it may seem for as GMR 2014 reminds us, the entire EFA effort is predicated on evidence that education, and especially literacy, reduces poverty, boosts growth, increases employment prospects, enhances health, reduces child mortality, narrows the gender gap and much else.[13] Even more to the point, a British review of research on citizenship education showed that the skills in question are most effectively developed when they are embedded in the teaching process rather than merely conceived as outcomes,[14] and this I also take to be the force of the references in GMR 2014 to critical thinking, communication, problem-solving and so on. This, once again, underlines the need for GMRs to engage with classroom process, for that's where citizenship starts.

This takes me to the third overarching problem identified in my earlier analysis. Brian Simon, the UK's most distinguished educational historian, famously asked 'Why no

12 GMR 2014, 295.
13 GMR 2014, 144ff.
14 Deakin Crick *et al* (2005).

pedagogy in England?'[15] and we might ask 'Why no pedagogy in the GMRs?' If pedagogy is both the act of teaching and the ideas, values, knowledge and evidence that shape and justify it, if it is what the teacher needs to know in order to make valid and effective classroom decisions,[16] and if once access and enrolment have been achieved it is what delivers the learning outcomes towards which EFA is directed, then it should have pride of place in a report entitled *Teaching and Learning: quality for all*. But it doesn't.

In EFA 2002, repeated in subsequent GMRs, there's a table calling itself 'an input-process-outcome framework for assessing education quality'.[17] At least process is included: all too often it remains securely locked in its black box. But that's as far as it goes, for in this framework process comprises just two elements, 'school climate' and 'teaching/learning'. The school climate indicators – high expectations, strong leadership, positive teacher attitudes, safe and gender-sensitive environments, incentives for good results, flexibility/autonomy - are preconditions or contextual factors rather than processes; and the teaching/learning indicators are confined to 'sufficient learning time', 'active teaching methods', 'integrated systems for assessment and feedback',' appropriate class size' and 'appropriate use of language'.

Apart from the fact that these indicators display, in their use of adjectives like 'high', 'strong', 'positive', 'sufficient', 'active' and 'appropriate', the problem of prescription in the guise of description that I referred to earlier, and uncalibrated prescription at that, most of them are also about context and conditions rather than processes. Only 'active teaching methods' and 'appropriate use of language' come close, but without further explication these don't amount to much.

In fact, the striking feature of the GMRs is that they don't so much engage with pedagogy as circle around it. Like knowledge itself, pedagogy is a very deep pool. Perhaps UNESCO is afraid of falling in.

So: indicators, measures, inputs, outcomes, processes and our mysterious friends quality and pedagogy. What has changed? I should say immediately that while GMR 2005 was confined to the indicators that have been a constant since Dakar, it was an exception to some of the tendencies I've mentioned. It reviewed definitions of quality from Jomtien, Dakar, the UN Convention on the Rights of the Child and elsewhere, comparing humanist, behaviourist, critical, indigenous and adult education approaches. It also took us back to the 1996 Delors report, *Learning: the treasure within*, whose simple but powerful distinction between learning 'to know', 'to do', 'to live together' and 'to be' deserves to be revisited .[18]

All this was timely and helpful. However, GMR 2005 then proposed a 'framework for understanding education quality' in the hope of combining and reconciling the differences which its discussion had exposed.[19] In fact, apart from juggling the boxes and providing a more detailed elaboration of contextual factors, and in spite of the excellent accompanying

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15 Simon, B. (1981) His critique was revisited a quarter of a century later in Alexander (2004), 'Still no pedagogy?'

16 Alexander, R.J. (2008), 47. The full definition is: 'Pedagogy is the act of teaching together with its attendant discourse of theories, values and evidence. It is what one needs to know, and the skills one needs to command, in order to make and justify the many different kinds of decision of which teaching is constituted.' This definition is more continental European than Anglo-American, and reaches back to Jan Komensky (Comenius) rather than to those 1960s US/UK curriculum builders for whom curriculum was paramount and pedagogy subsidiary. The neglect of pedagogy in the GMRs may relate to this unexamined legacy as well as to other problems this paper identifies.

17 UNESCO (2002), 81.

18 Delors, J. *et al* (1996).

19 GMR 2005, 36.

discussion of the nature of quality, the quality framework in GMR 2005 was not very different from that in GMR 2002, and its account of teaching and learning – which it revealingly renamed 'inputs' rather than 'process' – was almost identical. Learning as an input? Only if you view teaching as no more than transmission.

The chronology is interesting, too. GMR 2002 offered 'a framework for *assessing* education quality' while three years later GMR 2005 gave us 'a framework for *understanding* education quality'.[20] Surely it should have been the other way round, for you can't assess something without first understanding it. Does this back-to-front chronology illustrate a wider tendency in EFA monitoring, I wonder?

What happens when we fast-forward to GMR 2014? Here I can find no exploration, comparable to that provided by GMR 2005, of what educational 'quality' means. I assume that this is because it would look odd still to be debating such matters after ten reports and just one year before 2015. So in the assessment of progress towards EFA Goal 6, quality is characterised by the 'key indicators' of pupil/teacher ratio at the pre-primary, primary and secondary stages, the continuing teacher gender imbalance and the availability of textbooks.[21] To these is added a section on the need to strengthen international and regional assessments.[22]

All of these are important, but are they sufficient? And where, once again, are the processes of teaching and learning which the report itself acknowledges are so vital to the EFA effort? 'Strong national policies that make teaching and learning a high priority are essential', says GMR 2014, 'to ensure that all children in school actually obtain the skills and knowledge they are meant to acquire.'[23] Just so. However, in the next paragraph expectations that at last we are getting somewhere are dashed when 'teach*ing* quality' becomes 'teach*er* quality' and this unexplained but significant shift from teaching to teachers is then consolidated in the report's detailed discussion of teacher numbers, recruitment, qualifications, subject knowledge, training, retention and governance.

Again, and I must keep saying this so as not to be misunderstood, the emphasis on teachers is supremely important. Without teachers there is no teaching, and without good teachers the learning potential of many children will remain untapped. The correlation between teacher quality and learning outcomes is both self-evident and empirically demonstrated. But what are teachers to teach and how? And on what aspects of their teaching should their training concentrate, and why? And can we answer these questions if the nature of teaching has been inadequately conceived?

GMR 2014 does engage with some of these questions. It emphasises training for pupil diversity, gender parity and children with learning difficulties. It argues the need to compensate for teachers' poor subject knowledge and the importance of tools for classroom diagnosis and assessment, especially in relation to children at risk.[24] And then, in its crucial seventh and final chapter, 'Curriculum and assessment strategies that improve learning' it at last enters the classroom.[25] So 14 years after Dakar are we there at last? Have we finally reached pedagogy?

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20 GMR 2002, 81; GMR 2005, 36.
21 GMR 2014, 84-89.
22 GMR 2014, 89-99.
23 GMR 2014, 217.
24 GMR 2014, 233-241.
25 GMR 2014, 276-297.

Yes and no, but mainly no. The discussions of both curriculum and assessment are, within the limits they set themselves, useful. As I've noted, GMR 2014 departs from the exclusive preoccupation with literacy and numeracy and argues the need for a wider curriculum and transferable skills. However, it sticks to the received view, dating back to the 19th century, that literacy and numeracy are and forever should remain the sole 'basics' of education, regardless of time, location, culture or national circumstance.

In this matter, the case for literacy remains exceptionally strong as both a tool for individual empowerment and a lever for social and economic progress, and successive GMRs have convincingly documented its impact in these terms. But, heretical though some may find the thought, the case for continuing to give numeracy parity with literacy is neither proved nor even entertained; the habit of history, it seems, is sufficient justification, and because 'literacy-and-numeracy' has become in effect a single curriculum component, numeracy gets a free ride. Thus we are offered a curriculum in which only literacy, numeracy and citizenship are deemed 'basic'. But where, some beneficiaries of citizenship education might ask, are science or IT? And where, given the reference to transferable skills for citizenship, is the no less compelling evidence on transfer of learning through the arts?[26] Questioning fixed curriculum mindsets is surely as necessary a part of the GMR exercise as revisiting habitual assumptions about what constitutes a valid educational indicator, and if the task is thought to be necessary in England,[27] why not elsewhere?

Commendation with reservation also apply to the treatment of assessment. GMR 2014 breaks new ground in EFA circles (though not elsewhere) by discussing formative as well as summative assessment, or what in the UK we call 'assessment for learning'. But here the discussion is frustrated by the GMR's limited apprehension not of curriculum but of pedagogy. Effective assessment for learning is more than the tools, boxes and packs that in this context GMR 2014 recommends from examples in Uganda, Liberia, South Africa, Colombia and India, which indeed their evaluations show to be effective in terms of both diagnosis and outcomes.[28] More fundamentally, assessment for learning is the very stuff of which effective teaching is made: the day-to-day, minute-by-minute observations and interactions through which good teachers constantly monitor children's learning and progress, affording the feedback which will build on their understanding and probe and remedy their misunderstanding.

On this vital matter GMR 2014, like its predecessors, has little to say. Once again we trip over the black box or meet the figures circling the deep pool of pedagogy. Curriculum and assessment, input and outcome, but not process.

If I am right that pedagogy is the missing ingredient in accounts of educational quality in these global monitoring reports, and that where pedagogic process appears its treatment is confined to random indicators, and that these tend to circle the teaching-learning process

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26 See, for example, the evidence assembled for the (US) President's Commission on the Arts and Humanities (2011).

27 This refers to the most comprehensive and evidentially searching public enquiry for 50 years into the condition and future of English primary education, the Cambridge Primary Review. Among other matters, the Review proposed a curriculum whose core consists not of one or two subjects but of core learnings drawn from a larger number of subjects, all of which are deemed essential to a basic education. Having said that, language and literacy remain central as befits their incontestable foundational role in learning, employment and life. The framework is underpinned by a set of educational aims grounded in extensive national and regional discussions with parents, teachers, children and community representatives as well as government and national agencies (Alexander, 2010, 174-278).

28 GMR 2014, 288-289.

rather than engage with it, then as a prerequisite for improving matters in the post-2015 agenda we must urgently ask why this should be so. *Why* no pedagogy?

One answer is that when the availability and competence of teachers is a major challenge, as the GMRs show that it is, then it makes sense to focus on teachers rather than teaching, invest heavily in teacher recruitment, training and retention, and develop textbooks and classroom materials which in 1960s US parlance are 'teacher proof' and will enable even the minimally-trained teacher to do a reasonable job. On that basis, it may be thought that there's more to be gained from providing such materials than advocating more sophisticated and interactive models of teaching, especially in the context of large classes and multi-grade teaching. In these situations, textbooks and TLMs provide a predictable and reliable foundation for the teacher's work, effective even when the teacher is absent. For, as GMR 2014 reminds us, teacher absenteeism remains a major impediment to EFA.[29]

This argument is persuasive, though we must ask whether it is right for all circumstances and all teachers, and to what extent it should inform the EFA agenda after 2015. Making teaching 'teacher proof' may safeguard educational minima and compensate for teachers' poor training or erratic attendance, but it can be disempowering and, for competent and talented teachers, demeaning.

But is there another explanation for the neglect of process? I think there is, and it resides in the literature and evidence on which, since 2002, the GMRs have drawn.

Let's start with a simple head count. If you work through the 680 or so published sources listed at the end of GMR 2014, you'll find that in a report promisingly entitled *Teaching and Learning* the titles of only 40 of the cited publications – a mere 6 per cent – refer, directly or indirectly, to this topic. A somewhat larger proportion deal with teacher supply, training and retention, and a much larger proportion still are macro-level national or cross-national studies of education policies, programmes, strategies, governance, funding and outcomes.[30]

That apparently skewed citation profile encourages us to dig deeper. A decade ago, a review undertaken for the US National Research Council (NRC) identified three main types of international comparative study in education. Type 1 are large-scale policy-directed statistical studies of educational achievement, expenditure and other matters of the kind that emanate from OECD, the World Bank and the UN. Type 2 are desk-based extrapolations from international data aimed at identifying policy options and solutions (Michael Barber's three McKinsey reports are a good example). Type 3 include the majority of studies in the published corpus of academic comparative, international and development education. These range from broadly descriptive accounts of individual education systems to the 'thick description' of close-grained cross-national and cross-cultural comparative studies of school and classroom life and the forces that shape it.[31]

Types 1, 2 and 3 add up to a literature of considerable variety and richness. However, the NRC report adds that while the majority of published comparative education studies are Type 3, and while many Type 3 studies have significant policy applications, it's the Type 1 and 2 studies that receive most of the funding, political patronage and publicity. Meanwhile,

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29 GMR 2014, 267.

30 GMR 2014, 410-443. I cannot of course claim to have read every one of the cited publications, and am basing this assertion on scrutiny of their titles, authorship and publishing details. But it's an analysis I have applied elsewhere on the basis of full bibliographic search to other 'Type 1' publications: see, for example, Alexander (2012).

31 National Research Council (2003). 'Thick description', the ethnographer's credo, is from Geertz (1983).

Type 3 studies have more limited funding and rarely come to the attention of policy makers or Type 2 reviewers. The NRC report judges this to be deeply unfortunate because Type 3 studies engage with education, teaching and learning as they are enacted and experienced in schools and classrooms to an extent that Type 1 and 2 studies do not and by virtue of their methodology cannot. This neglect of Type 3 evidence reinforces the remoteness of policymakers and the policy process from schooling as it is experienced by teachers and children, and increases the risk that high-cost and high-stakes interventions relating to teachers, teaching and learning may be misconceived or misdirected.

Following the NRC analysis, what we may have, then – not universally or inevitably, but too frequently - is a six-fold problem of evidential selectivity in the corridors of power. First, the preferred evidence is top-down. It reflects the world, the preoccupations, the priorities and the experiences of policymakers rather than those of teachers and children. Second, it may privilege a supposedly international but essentially western perspective over an indigenous one. Third, its view of school and classroom life may be be generalised, coarse-grained, unnuanced and perhaps simplistic. Fourth, its understandable pursuit of what can be measured removes from the agenda and consciousness of policymakers those vital aspects of education that quantification cannot access. Fifth, it ignores a substantial tranche of evidence of which, in the interests of competent and democratic policy making, policymakers, or at least their advisers, have a duty to be aware. Sixth, it is self-sealing and self-reinforcing. Reading UK government publications I am constantly struck by the extent to which they refer only to other government publications. Such circularity in evidence, argument and policy is always dangerous.

It would be impolite of me to accuse GMR 2014 of these tendencies, but given what I've said about the balance of published sources listed at the end of the report the possibility at least deserves consideration, for GMR 2014, like all the GMRs, leans more towards Type 1 evidence than Type 3. In doing so, is it missing something important? I think it is.

I want to end by showing how in the elusive area of pedagogy such evidential selectivity and imbalance can be avoided and how it can greatly enhance the debate about the quality of teaching and learning in EFA. I'll deal with the matter first conceptually, then empirically.

The genealogy of the teaching-learning framework in GMR 2002 which was modified in GMR 2005 and remains influential in EFA is clear: 1960s US process-product research transmuted into 1990s transatlantic school effectiveness research and domesticated by international agencies like the World Bank.[32] It atomises rather than synthesises, includes only what can be easily measured, views teaching as simple transmission and so concentrates much more on the teacher than the learner, and treats culture not as an all-pervasive feature to be handled with care, sensitivity and humility but as just another variable to be confidently factored and crunched.

I won't claim that my own alternative is the one to adopt, but it least it provides a contrast. Striving to develop a framework for the analysis of quantitative and qualitative classroom data from five very different education systems in Europe, North America and Asia, I started with what I believed were two irreducible propositions about the nature of teaching, as it is in any context:

- *Teaching, in any setting, is the act of using method x to enable students to learn y.*

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32 For analysis and critique of this paradigm: Alexander, R.J. (2008), *Essays on Pedagogy.* London: Routledge, 9-42.

- *Teaching has structure and form; it is situated in, and framed by, space, time and patterns of organisation, and it is undertaken for a purpose.*

From these I derived a framework comprising the *act* of teaching (divided into the learning *tasks* devised, the *activities* and *interactions* through which the tasks are mediated and the *judgements* by which students' needs, progress and attainment are assessed), the *form* by which units of teaching are bounded (usually the lesson) and the organisational, curricular, epistemic and temporal elements of its *frame*. (Figure 1)

Figure 1
Teaching as act

Frame	**Form**	**Act**
Space		Task
Student organisation		Activity
Time	Lesson	
Curriculum		Interaction
Routine, rule and ritual		Judgement

Alexander (2001), 325

Each of these was then further elaborated to support a mixture of quantitative and qualitative data analysis.[33] The framework has been shown to be not only comprehensive but also as culture-fair as any such cultural artefact can be. At this moment, for example, a research team at Ben Gurion University is using it to analyse the nature, strengths and weaknesses of Israeli pedagogy.[34]

Teaching as act identifies the cross-cultural *invariants* of teaching. We then need a framework for making sense of the cultural *variables* that shape these, a framework which accesses teaching as *ideas* and which enables, formalises and locates teaching as act. (Figure 2)

Figure 2
Teaching as ideas

Classroom level: ideas which *enable* teaching

- *Students* characteristics, development, motivation, needs, differences.
- *Learning* nature, facilitation, achievement and assessment.
- *Teaching* nature, scope, planning, execution and evaluation.
- *Curriculum* ways of knowing, doing, creating, investigating and making sense.

System / policy level: ideas which *formalise and legitimise* teaching

- *School* infrastructure, organisation, leadership, staffing, training.
- *Curriculum* aims, content
- *Assessment* tests, qualifications, entry requirements
- *Other policies* e.g. teacher recruitment and training, equity and inclusion

Cultural / societal level: ideas which *locate* teaching

- *Community* familial and local attitudes, expectations and mores
- *Culture* collective ideas, values, customs, relationships and worldview
- *Self* personhood and identity

Alexander (2008b), 181

33 Alexander, R.J. (2001) *Culture and Pedagogy: international comparisons in primary education,* London: Blackwell-Wiley, 320-528.

34 For an early paper from this project: Lefstein (2013).

In my own work I found that such ideas concerned not just the nature and purposes of learning, knowledge and teaching - transmission, induction, negotiation, facilitation, acceleration and so on - but even more fundamentally what I called 'primordial values' about the relationship of the individual to others and to society which translate into culturally-distinctive classroom routines and patterns of organisation. This could take us into discussion of so-called 'western' and 'non western' models of teaching for which there isn't time, except to note that to portray the cultural diversity of teaching and learning as conceived and enacted across 196 nations and thousands of cultures and sub-cultures as a simple choice between 'western' and 'non-western' is crude in the extreme. Note, too, that this dichotomy makes 'western' the default and 'non-western' the aberration.[35] Edward Said would have had something to say about that.[36]

There's no way that the GMR paradigm can capture any of this. What the comparison of these frameworks also signals is another important question: are there universals in teaching and learning that apply across cultures and contexts, or is everything culturally unique? In my own work I strenuously argue that culture and history are the keys to understanding and comparing national education systems. But I also believe from what we know about human development and education across cultures that there's a level at which pedagogic universals can be defined. My complementary frameworks for teaching as act and ideas try to capture these.

Frameworks like those I've exemplified expose the conceptual incompleteness of the input-output models in GMR 2002. Above all, the classroom interaction through which both learning and teaching are mediated is almost absent from the GMR frameworks. Let us therefore stay with interaction, mindful of the NRC's judgement that policy-directed studies lean too exclusively on Type 1 and 2 research and ignore Type 3 - a judgement which, in relation to the interactive heart of teaching and learning is born out by the bibliography of GMR 2014. Where, then, can we go to plug this gap?

There is a considerable literature on classroom interaction in general and educationally productive talk in particular, but I'll mention just two major sources that have the virtue of being comprehensive, methodologically diverse, cross-cultural, cross-national and rigorously empirical. Further, their publication dates coincide neatly with GMR 2014 and our consideration of the post 2015 agenda.

The first is a collection of research papers arising from an international conference on classroom talk which was convened two years ago at the University of Pittsburgh, USA, under the auspices of AERA.[37] This brought together many of the world's leading researchers in the areas of pedagogy and linguistics to establish whether, after several decades of research, we have proof of concept that high quality classroom talk not only engages children's attention and participation – as we've known for a long time that it does – but also raises their standards of achievement in tests of literacy, numeracy and science.

The answer to that question was conclusively affirmative. There's now a critical mass of randomised control studies in different countries showing that high quality classroom talk enhances understanding, accelerates learning and raises measured standards. This finding is also confirmed in Hattie's synthesis of 800 meta-analyses relating to student achievement in respect of interactive strategies such as reciprocal teaching, peer tutoring, student

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35 These matters are discussed in a paper first presented at the 2002 AERA Annual conference and later revised for Alexander (2008b), chapter 4.

36 Said (1985)

37 Resnick *et al* (2014).

verbalisation and feedback.[38] Such strategies, in Hattie's words, make children's learning *visible* to the teacher and hence amenable to appropriate diagnosis, assessment and intervention (Hattie 173-8). The quest for indicators of visible learning would be a useful exercise for the team of GMR 2015. 'Visible' and 'measurable' are not, however, synonymous.

The other study counters the claim that because the research I've cited comes from classrooms in high income countries it cannot fairly be expected to apply in the context of EFA. This second study, hot off the press, is a rigorous EPPI review of research on pedagogy, curriculum, teaching practices and teacher education in developing countries which the UK government's Department for International Development (DfID) commissioned from the University of Sussex.[39] Having trawled 489 studies from middle and low income countries, the Sussex team examined 54 of these in depth. While acknowledging the methodological limitations of some of the studies the Sussex team nevertheless felt able to conclude that classroom interaction is the pedagogical key. They highlighted as feasible and proven strategies for effective teaching in these contexts inclusive and supportive communication, varied teacher questioning, informative feedback, building on student responses, student questioning, and other elements of what I call dialogic teaching.[40]

All the studies in these important US and UK collections, which together include classroom research from high, middle and low income countries, are Type 3. Being Type 3 and engaging with teaching as it happens they show not just that high quality classroom talk makes a difference but how it can be improved. But only a handful of the studies in the Sussex report, and none of those from the AERA symposium, found their way into the vast bibliographies of GMR 2005 and 2014, dominated as these were by Types 1 and 2. In the UK, meanwhile, a major research and development project has just been approved which will capitalise on such evidence to pilot, develop, test and evaluate the capacity of talk-rich teaching strategies to close the achievement gap between some of Britain's most disadvantaged children and their more advantaged peers. [41] Pedagogy, equity, quality.

And so we return to my initial questions:

- Does the account of quality in EFA attend to what really matters in teaching and learning?
- Are the classroom processes and outcomes that are truly transformative for our children adequately captured in the EFA goals, objectives and targets, the EFA monitoring indicators and measures, and the evidence on which EFA thinking and policy draw?
- If not, what are the implications for EFA after 2015, and if learning is to be a target, how should it be defined, indicated and assessed?

As I said earlier, it's for you – and UNESCO, GMR teams, governments, Norad, DfID, other donors - to answer these questions, though my own view will by now be clear. I submit that in respect of the monitoring of quality in teaching and learning in EFA we have a problem which is both conceptual and empirical. Neither quality nor pedagogy are adequately conceived, and some of the world's most important and relevant evidence on teaching,

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38 Hattie, J. (2009).

39 Westbrook *et al* (2013).

40 Alexander, R.J. (2008c).

41 *Classroom talk, social disadvantage and educational attainment: closing the gap, raising standards*. A joint project of the Cambridge Primary review Trust and the University of York, to be funded by the UK Educational Endowment Foundation.

learning and their improvement has been ignored. Classroom interaction is the most prominent and perhaps crucial aspect of pedagogy, among several, to suffer this fate.

There are many barriers to achieving education for all, but evidence should not be one of them. Quality in teaching and learning is a global imperative. It demands a global community of discourse. Let us approach GMR 2015 and EFA post-2015 with a commitment to make much more inclusive use of the abundant evidence on pedagogy that is now available in order to exert maximum impact on quality where it matters: in the classroom. Stop tiptoeing around the pool of pedagogy. Take the plunge.

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