

## Learning outcomes

### General comments

This paper from FTI-S is a very interesting proposal with new and promising research areas following Helen Abadzi's work on instructional time or neuro-cognitive constraints.

Academic literature is relatively rich in the economic field (production function analysis mostly<sup>1</sup> and impact evaluations more recently<sup>2</sup>). It tells us a story where inputs such as teachers' training and even textbooks have relatively low impact, and where the most significant variables are the pupil characteristics (not surprisingly), and the black box (comprising various unexplained characteristics related to the class//teacher and/or school, and the institutional context). How comes it that teachers training has so little impact in a manpower industry such as Education? Rather counter-intuitive indeed and PISA and Mackinsey (2007) do emphasize the difference that competent and motivated teachers and leaders can make.

There has been light shed into this black box with growing evidence about the role of instructional time and teachers and pupils' motivation. But too little attention has been paid so far to pedagogical and cognitive issues (and also to motivation). Too little data is available on teachers' practice in African schools as well as in African teachers training colleges.

Teachers' practice is a very useful concept since it encompasses pedagogical dimensions, classroom and school management as well as more anthropological issues (representations of knowledge and teaching, relations and representations of relations between teachers and pupils, teachers and families, teachers, schoolheads and inspectors , etc.). Here is a serious knowledge gap that must be filled preferably through multidisciplinary research.

Surprisingly, there is no reference in the paper to recent work on school efficiency such as the 2010 Mackinsey report<sup>3</sup> or "Making schools work" recently published by the World Bank. Though modern in its perspectives, the paper tends to follow a somewhat traditional route by focusing on inputs (curriculum, textbooks, ECD, teacher training, remediation strategies) and paying little attention to context i.e. institutional and sociological issues (governance, political economy of reform implementation) as well as to some important dimensions of school readiness (health, eyesight, nutrition, child labour at home) that affect the poorest segments of society and which may also translate into public policies for better learning outcomes.

Social anthropologists have investigated the mundane functioning of health service delivery in Western Africa

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<sup>1</sup> See Mingat A. (2006), *Quality of educational services in Sub-Saharan Africa and identification of the factors and policies to improve it in Education in Sub-Saharan Africa : A comparative analysis*, Worldbank (forthcoming) .

<sup>2</sup> See Bruns B., Filmer D., Patrinos H. (2011) *Making schools work*, Worldbank

<sup>3</sup> Barber M., Chijioke C., Mourshed M. (2010) *How the world's most improved school systems keep getting better*, Mackinsey report

and shed light on the way the various actors agree on their own set of informal rules (sometimes for the benefit of service delivery, sometimes not). Similar research is needed in the Education sector. It would help clarify the issue of motivation and incentives in poorly resourced contexts, obedience to rules or evasion, monitoring, supervision, etc.

The political economy and the sociology of reforms must also be taken into account : designing reforms is one thing, implementing them at the grass root level is quite an other. Knowledge needs to be generated in the area of reform implementation. .

While commending the authors for this interesting paper, I will advocate a balanced approach between issues related to teachers and inputs, issues related to pupils (readiness) and issues related to institutions. I will comment the various sections of the paper, suggest additional questions of research for the 8 topics, and also identify missing topics.

## Review and specific comments

1. *Introduction.* No particular comment on this concise and forceful intro which balances well the various aspects (pedagogical, managerial, institutional etc).
2. *Proposed activities.* Agreement on the fact that sufficient knowledge exists in some areas and that pilots (with rigorous impact evaluation) should be tested and scaled up (activity 3). But there is no quick fix to some of the most crucial issues (training, institutional frameworks and so on). Knowledge generation (activity 1) is absolutely necessary in some of the areas mentioned above and must receive a fair share of GRA 's attention and budget.

All the 8 key technical topics listed in the paper are result oriented and deserve attention but the list is too narrow and input oriented (see previous section supra).

4 equally important topics are missing : (i) pro-poor demand side policies to improve school readiness (health-nutrition, after school activities etc.), (ii) school governance (how to reach local consensus on what can be expected from the various actors to achieve measurable results), (iii) motivation enhancement in contexts where the public wage bill is a heavy constraint leading to a composite teachers working force (civil servants, contractual teachers, community paid teachers) and (iv) reform implementation (review of literature and research to identify good practice and reasons for failure).

3. *Research and Knowledge.* Research will be necessary when and where there is not enough convincing literature for review which is the case in quite a few of the topics considered above.
  - i. Refinement of indicators. Agreement on the typology of indicators and on the need for monitoring instructional time (a useful intermediate output indicator for monitoring change in school and classroom management). AFD is currently commissioning researchers (Altinok and Bourdon) to review all the different comparative evaluation systems (PISA, TIMSS, PIRLS, PASEC, SACMEQ, LLECE) as well as national assessment systems and EGRA/EGMA, and to make recommendations for both a comparative Africa-wide system (with links between PASEC and SACMEQ) and sustainable national assessments that would measure and monitor learning outcomes and school added value. A first report should

be available by December 2011. The issue of public examinations should be tackled with some determination since passing or failing these examinations will always be the most significant indicator for pupils, parents and teachers. Many curricular reforms (introducing local languages or competency based curricula) have been undermined by obsolete and inadequate public examinations. Making sure that examinations do have psychometric validity and are linked to the actual curriculum is therefore a valuable perspective and a prerequisite for service delivery accountability.

- ii. Indicator repository. Section 3.3.8 mentions PASEC/SACMEQ/LLECE as possible candidates. Good idea. PASEC and SACMEQ have started to collaborate (to share items and methodologies) under the auspices of IIFE and this could help promote an African wide comparative system. Edstats (WB) could also be the appropriate SE. This issue is also tackled in sub section (x) about performance measurement.
- iii. Research-based instruction in early grades. Neurosciences and educational sciences must be called for to investigate this important topic. Norms, references, guidelines are definitely needed.
- iv. Use of local languages in the instruction of basic skills. This topic has been investigated rather thoroughly (GTZ/ADEA for English speaking Africa and AUF/OIF/MAE/AFD for French speaking Africa)<sup>4</sup>. There is consensus on the advantages of additional bilingualism i.e. use of local languages throughout the primary cycle and progressive introduction of an international idiom. The case for multilingualism is convincing enough but the question is how to go forward with this issue which is very context-dependent. The issue is not simply technical but highly political. Issues of status are implicit when choosing the language of teaching even though children may know several local languages<sup>5</sup>. Social acceptance is as important as linguistic proximity and it is risky to extrapolate from one context to another. There must be consensus within the school community on linguistic choices. It also takes time and human resources to equip all idioms with the appropriate didactic framework (grammar, lessons planning, textbooks etc.)

Further more it's difficult and costly to manage more than 8 or 10 local languages in the Education system and in countries with over 200 languages such as Cameroon, governments have been reluctant for both political and practical reasons to promote local idioms in primary schools (In spite of this predicament, Cameroon' score in PASEC tests is, one the best in the sub-region which does not put any pressure on the government to reform its linguistic policies). Yet, even in such a case where French or English remain the sole language of teaching, local languages are used orally by teachers to manage the class

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<sup>4</sup> Alidou H., Heugh K. et al. (2006) *Optimizing learning and education in Africa – the language factor*  
[http://www.adeanet.org/adeaPortal/adea/biennial-2006/doc/document/B3\\_1\\_MTBLE\\_en.pdf](http://www.adeanet.org/adeaPortal/adea/biennial-2006/doc/document/B3_1_MTBLE_en.pdf)

Maurer B.,(2010) *Les langues de scolarisation en Afrique francophone : enjeux et repères pour l'action*, AFD, MAE, OIF, AUF  
[http://www.afd.fr/jahia/webdav/site/afd/shared/PORTAILS/PUBLICATIONS/PUBLICATIONS/co-editions/Langue\\_de\\_scolarisation\\_en\\_afrique\\_francophone.pdf](http://www.afd.fr/jahia/webdav/site/afd/shared/PORTAILS/PUBLICATIONS/PUBLICATIONS/co-editions/Langue_de_scolarisation_en_afrique_francophone.pdf) executive summary in English forthcoming and available on request

<sup>5</sup> Senegal is a good example : wolof is understood and spoken by 90% of the population but speakers of pulaar, sereer, joola, malinke would be reluctant to have their children educated in wolof.

room even though they are not supposed to do so. How could teachers in such contexts be trained to use the local languages not as “free riders” but as an efficient means to manage the classroom (explain, tell pupils what to do) and support interactions? This distinction between oral and written language is also valid for local languages (local dialect vs most widely used dialect). Teachers need to use orally the local dialect for classroom management but refer to the most common variety within the linguistic group for the teaching of writing and as the subsequent language of instruction.

Equal attention must be paid to the progressive introduction of international languages (L2) and to learning outcomes in those languages in the later grades if we want parents to support local languages (L1) in early grades. Some reforms have been undermined by failure to do so. Research is needed on how to articulate L1 and L2 (how to use meta-knowledge acquired with L1 to better teach L2). Learning outcomes measurement and public examinations must also take into account both L1 and L2.

Within French speaking Africa, countries such as Burkina Faso, Burundi, Niger and Mali are the most advanced in promoting the use of local languages for the acquisition of basic skills. Funds will be available for those countries from AFD and OIF (Organisation Internationale de la Francophonie) to scale up and for other countries to experiment and pilot. Additional research and evaluation funded by GRA could indeed add to this momentum.

- v. Early Childhood Education. Nothing to add or suggest. Promoting efficient community-managed ECE is an important challenge to be met.
- vi. Effective and efficient maths instruction. Some academics<sup>6</sup> argue that cultural issues may partly explain the poor performance of SSA children in maths and science. Traditional calculation for example is not done on a decimal basis in most SSA countries but with 5 digits calculation systems instead. Illiterate parents get confused and cannot help their children though they may have a good level of numeracy or abstractedness in their everyday life or when playing traditional games (awale or checkers). Should not endogenous and traditional knowledge receive more attention in Education? This issue should not be ignored if we are to promote observational learning that requires as much contextualization as possible and support also the use of local languages that are closely related to local knowledge. .
- vii. Teacher training and supervision. This is a key issue since training, motivation and accountability are the main levers by which teachers practice can be changed for better learning outcomes. In SSA most curricula reforms (competency based curriculum included) have not changed the actual curriculum in schools and in TTCs. They have added a new layer of professional jargon used by the supervisors but they have not changed teachers' practice. Teachers model on their own teachers, they refer to their own experience as learners; they seldom have any concrete reference of what the new paradigms

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<sup>6</sup> See among others :

Vellard D. (2005) “Local knowledge, local languages, education and sustainable development: the case of Mathematics” UNESCO

Tourneux H. (2010) *La transmission des savoirs : savoirs locaux et langues locales pour l'enseignement de base en Afrique.* A paraître

(observational learning, socio-constructivism) mean in practical terms. References (video sequences of good and not so good practice with critical comments, model planning use to maximize interaction and learning processes, etc. must be made available (Open Education Resources). Those sequences should deal with the most common contexts in LDCs i.e. pupil/teacher ratio over 60 (urban contexts) and multigrade teaching (rural contexts). Research should be funded to observe and analyze teachers' practice (in schools and TTCs). Improving the Stallings Classroom snapshot is also necessary not only to measure time of instruction but also to assess other important aspects of teachers practice (task difficulty, teachers representations, attention paid to pupils lagging behind, formative assessment etc.)<sup>7</sup>. Implementing a research program on teachers practice and TTC teachers practice in Africa and promoting such analytical techniques among partner countries universities would be an important step forward. Research proposals could be made by AFD on this topic.

viii. Remediation strategies. Very important topic indeed to improve survival rates and learning outcomes. Also an important ingredient of pro-poor demand-side policies (see xii infra). Requires particular attention because it must be tailored to local needs and resources and therefore linked to decentralization and school based management. Description of methods, institutional settings, costs and funding as well as evidence on effectiveness are indeed badly needed.

ix. Textbook production and use. The proposal is interesting and innovative. The issue of teachers' guides should be dealt with as well. What should teachers' guides contain to help teachers make optimal use of textbooks? But is clear evidence available on what is the most efficient mechanism for textbook provision (international bidding/local publishing, public provision or vouchers for parents to purchase books)?

An other issue related to inputs is the data gap on what non teacher salary expenses really are. In most national budgets, it is a black box mixing social, administrative and pedagogical goods and services. Whether "non teacher salary expenses" are above or below 33 % of the teachers wage bill does not mean much as such. More detailed benchmarking would be useful.

x. Performance measurement and evaluation. A key topic of course if we want improvements to occur, though few countries indeed have made changes on the basis of standardized tests. There may be four reasons for this shortcoming: (1) standardized tests are technocratic, they do not "speak" to the average teacher or parent, (2) they tell that something is wrong but seldom what is wrong, (3) they measure the average score and the standard deviation within a sample but are too costly to be implemented in every school in order to monitor performance and (4) public examinations is what matters most to pupils,

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<sup>7</sup> Bru, M. Altet, M. Blanchard-Laville, C. (2004)- *A la recherche des processus caractéristiques des pratiques enseignantes dans leurs rapports aux apprentissages*, *Revue Française de pédagogie*, n° 148, .

parents and teachers.

Cross-country evaluation is necessary and it is best done on a sampling basis but regular assessment of each and every school is also necessary to enhance accountability and client power. The challenge is therefore to develop simple but valid procedures that are not too costly and are meaningful to local actors. National public examinations and semester exams could serve this purpose provided they had psychometric validity. A well designed improvement of national exams should be piloted in 2 or 3 countries.

Early grade assessment is an important issue with no sustainable solution so far. EGRA is too costly and dependent on external partners (RTI) to be scaled up. Furthermore cross-country comparison of reading speed is irrelevant since it's dependent on language phono-graphematic complexity (Finnish is much easier to read than English or French not to mention Chinese and reading speed in early grades is bound to differ significantly). Yet pupils performance and progress in early grades must be assessed and benchmarked nationally. The challenge will be to design and customize a valid tool that can be implemented in a sustainable way by national teams (in every language of teaching) with the support of SACMEQ/PASEC (but not in a comparative perspective) and other external partners. This is a research area GRA could fund.

As important (and perhaps even more important) is the perspective of an Africa-wide assessment framework that could evolve from SACMEQ and PASEC who have built capacities in most African countries. IIPE convened, in 2011, a technical meeting for the two teams to share their experiences. As the funding agency of PASEC, AFD supports this perspective. GRA could support joint research programs between PASEC and SACMEQ (and LLACER?) that could, on the medium term, lead to a comprehensive and coherent African evaluation framework with the possible support of external partners (IIPE, IEA etc).

E- courses on psychometrics and evaluation techniques could also be developed by SACMEQ/PASEC with the support of GRA and other external partners.

## Missing topics

- xii) pro-poor demand side policies to improve school readiness. Pupils' characteristics affect learning outcomes. Talent and intelligence are of course important factors but poverty and inequality have trans-generational effects via school readiness which is very dependent upon the socio-economic and cultural background. Health, eyesight, nutrition, early cognitive development, child labor and availability of time for homework at home are influenced by poverty and they influence learning outcomes. Understanding these mechanisms should help design cost efficient demand side policies. Some countries like Burkina Faso have observatories collecting in depth longitudinal data on each and every household (with data on household activities, income, births, children weight, head circumference, schooling etc.) that could be matched with learning outcomes measurement to shed light on this issue. Pilots for improvement could be designed and

tested in a second phase. A research proposal has been prepared by the University of Ouagadougou (Demographic Studies Institute) in partnership with Paris Dauphine University.

- xiii) school governance and local stakeholders. Why do local stakeholders do with bad service delivery? Is it simply a matter of information? Will better information and school based management be enough to improve results? As mentioned earlier, social anthropologists have investigated the mundane functioning of public service delivery in Western Africa (see JP Olivier de Sardan, M. Tijani Alou and T. Biershenk among others)<sup>8</sup>; they have shed light on the sets of informal rules (or pragmatic norms) local stakeholders “agree” upon (sometimes for the benefit of service delivery, sometimes not) for a great variety of reasons (there may be social norms, but official norms may also be inapplicable and require substantial deviation from the norm). Such research would be welcome in the Education sector where teachers’ absenteeism as well as the absence of proper supervision tend to become accepted norms. Social sciences can help clarify, in poorly resourced contexts, the issue of motivation, obedience to rules or evasion, supervision, sanction, corruption etc. The social anthropology of development laboratory (LASDEL) of the university of Niger could make a research proposal along this lines in partnership with the university of Mainz (D).

Is there consensus on what quality means? Do all actors have the same expectations? If not, can reforms be successfully implemented?

In industry and service delivery it is now common to assess quality on the various stakeholders’ satisfaction. Quality is thus viewed as a process as much as an outcome. School self evaluation (within a country-wide conceptual framework) has been implemented very successfully in Scotland and is also being tested in the Netherlands<sup>9</sup>. One of the necessary conditions for such a process (and also one of its outcomes) is consensus among stakeholders on what quality outcomes should be expected, how resources should be used, how the school should be run and what the school team should be accountable for. Such an approach gives food for school based management but to what extent is it applicable to developing countries? Experimental research is needed to clarify this.

- xiv) motivation enhancement. How to ensure motivation in contexts where unit costs need be curbed down to sustain growing enrollment, where the public wage bill is a heavy constraint leading to teachers shortage and/or to a composite teachers working force (combining civil servants, contractual teachers and community paid teachers). Contractual hiring is more flexible than civil service status and according to theory can adjust more easily to financial sustainability constraints as well as to “pay for performance’ measures. However, social sustainability may be a problem when it involves different professional statuses for the same job.

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<sup>8</sup> See Olivier de Sardan, J.P. *A la recherche des normes pratiques de la gouvernance réelle en Afrique* Working paper  
Lund, C. *Twilight Institutions: Public Authority and Local Politics in Africa*

<sup>9</sup> see John Mc Beath, Cambridge Univ. U.K. for more information

How to build a professional body when heterogeneity and frustrations are high? What “low cost” incentives have proven efficient? How to maneuver incentives for performance or deployment to rural areas into the budgetary constraints? Experience sharing and creative thinking are necessary on this hot topic that deserves much attention.

- xv)** reform implementation. There is strong evidence for example that repetition is arbitrary and leads to failure and dropping out. Yet it is difficult to implement automatic promotion if no remedial policies are put in place for pupils falling behind and if local consensus is not reached on such policies. Parents and teachers will claim that forbidding or limiting repetition can jeopardize quality. Similar conflicts of opinion can be observed for multigrade teaching, competency based curriculum<sup>10</sup> or the use of local languages. Many reforms are never implemented or very marginally so. Others fail or undergo mutations when implemented. Why is it so? Has this been documented? Are there any lessons to be learned on reform implementation? A review of literature and/or a call for proposals on this topic would be welcome.

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<sup>10</sup> See Cros F. et al. *Les réformes curriculaires par l'approche par les compétences en Afrique* (AFD document de travail n° 97, 2010)

<http://www.afd.fr/jahia/webdav/site/afd/shared/PUBLICATIONS/RECHERCHE/Scientifiques/Documents-de-travail/097-document-travail.pdf>