Improving regional and international monitoring of the teacher workforce, UIS survey on teachers at the sub-national level

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The call for a data revolution by the High-Level Panel on the Post-2015 Development Agenda (United Nations, 2013) has emphasized the critical importance of monitoring and evaluation in the achievement of the post-2015 goals. More recently, recommendations from the Education for All Global Monitoring Report 2013/2014 highlighted the importance of having the right statistical capacity to support the development of education and teacher policies:

“One of the features of poor quality education is insufficient numbers of teachers, and in particular insufficient numbers of trained teachers. It is therefore vital to have good information on future teacher needs and to recruit and train teachers accordingly.” (UNESCO, 2014) p217

The recent focus by the international community on teacher effectiveness results in increasing data needs to discuss the issue, inform the debate and monitor progress. While some data on teachers exist they are still scarce and a number of comparability issues remain. Asia-Pacific, as other regions, has yet to achieve such data revolution to support evidence-based policies on teachers. This especially with regard to regional and international monitoring and bearing in mind that these should ultimately be sub-products of well-functioning national statistical systems.

Some data collection exercises have looked at enabling policy designs for building a more effective teaching profession (World Bank, 2012). Other surveys have looked, mostly at developed countries, into teaching conditions from the point of view of teachers and school principals (OECD, 2014). However, the international community has yet to come up with adequate tools and measurement frameworks to achieve appropriate monitoring of teacher effectiveness.

Over the past two years, the UNESCO Institute for Statistics (UIS) invested into enhancing its data collection on teachers. Firstly, UIS is developing a global module on teachers to address gaps in the international monitoring of the teacher workforce at the country level, notably regarding age, gender, professional status and academic qualifications. Secondly, to address some of the concerns in monitoring and comparing the large diversity of teacher training programmes, the UIS is considering the development of a teacher training taxonomy. Lastly, and this is the focus of this short paper, the UIS has recently piloted and will be scaling up in Asia in 2015 a survey on teachers at the sub-national level to respond to upcoming international education data needs on quality and equity.

How can UIS surveys inform the debate around teacher effectiveness? The pilot survey on teachers at the sub-national level has already shed light on a number of issues linked to teacher effectiveness and efficient management of the teacher workforce. UIS data enable the characterization of teacher workforce management throughout the country and in particular regarding deployment, qualification and recruitment of teachers. While these are not direct determinants of teacher effectiveness, they are, nonetheless, signals of good performing teacher workforce management systems. “Where teachers are poorly managed, teachers’ status falls lower and lower and consequently, so does their motivation and morale” (Mpoposa, Ndaruhusse, McBride, Nock, & Penson, 2008) p35. In particular, UIS regional survey on teachers enables policy makers and development partners to answer the following questions:

-Is the teaching force adequately distributed across regions?
-What are the priorities a country should focus on and in which region?
- Do all regions have enough qualified teachers? How does that compare to other countries?
- Where should a country expect to replace teachers due to attrition or ageing workforce and where does it need to recruit additional teachers to fill in current gaps?
- Is the professional status of teachers the same throughout the country?

Finally, the capacity to fill in UIS regional survey on teachers is also an indication of how well the country is able to monitor its teacher workforce. In a number of countries, teacher workforce management is hindered by poor statistical capacity resulting in inadequate monitoring. Most of the time, data to appropriately monitor the teacher workforce do exist in one form or another but rarely do countries collect and process these data in a way that would enable them to extract meaningful information and even when this is done not much analyses are carried out with the data.

**Preliminary results from UIS regional module on teachers**

Evidence-based policy recommendations are crucial to ensure efficient allocation of resources and optimal choices supporting the goals of a national education blueprint. What do you monitor and how? Do the data exist and are they compiled in the right format? What policy orientations should be deduced from the data? What could be the associated cost?

UIS regional module on teachers supports countries in making the best out of their existing data while pointing towards potential areas of improvement in the monitoring of their education systems. The survey has been developed to support the production of internationally comparable data at the sub-national level, (e.g. provinces, states, districts) on teachers (age, gender, qualifications, training, professional status, type of institutions, teaching experience) and by education level (ISCED 1, 2 and 3). The data collected and indicators calculated will ultimately be available to support the monitoring of upcoming international and regional agendas.

1. **Supporting the development of teacher policies**

**Deploy teachers where they are most needed; serve undeserved regions**

“It is equity that drives quality improvement, not the other way round.” (Sahlberg, 2013)

As put by Pasi Sahlberg, author of “Finnish Lessons: What can the world learn from educational change in Finland” (Sahlberg, 2011) equity, and especially equity in the distribution of good teachers is one of the most powerful tool to improve the quality of an education system overall. Effective teachers have a stronger impact on low achievers and pupils from disadvantaged socio-economic backgrounds and allocating the best teachers to areas most in need strongly support closing the gap in learning outcomes between the poorest and the richest (Gauthier & Dembélé, 2004; Hanushek & Rivkin, 2012). Some of the best performing countries have already put in place successful policies in that regard. In the Republic of Korea for instance, about 77% of teachers in villages have at least a bachelor degree compared with 32% in large cities and 45% have more than 20 years of experience compared with 30% in larger cities (UNESCO, 2014). In addition, a recent review of forty national education plans (including eleven countries from Asia and the Pacific), indicates that more than two-thirds of these documents include discussion about deployment or redeployment of teachers to disadvantaged areas. However, the “nature of this deployment varies between countries and is often unclear as to whether it is voluntary or required.” (Hunt, 2013) p13. The review also notes a general lack of evidence on the success of these policies aimed at redeploying teachers. By providing a yearly snapshot of countries at the regional level, the UIS module on teachers aims at filling the monitoring gap and making such data available to national, regional and international policy makers. Preliminary results from the survey actually show that not all countries face similar challenges regarding the distribution of teachers on their territory and also identify varying needs between regions of a same country. Taking the example of Malaysia, the country, which has achieved some of the greatest gains in the recent decade, has reached a state where all regions are fairly equal in
terms of teacher allocation and teacher qualification at primary education level. At the other end of the spectrum, Cambodia, which is smaller than Malaysia but has also achieve significant progress in primary education has not managed yet to provide all of its provinces with the same quality of teaching be it either in teacher qualification or number of pupils per teacher (Figure 1). Priorities between Cambodian provinces differ. Some provinces only have teacher qualification concerns while most remaining provinces actually need to look at qualification and recruitment of teachers. Similar analyses have been carried out for ISCED levels 1, 2 and 3.

In addition, data on teachers by subject-matters (reading/writing and mathematics) are also available for ISCED levels 2.

**Figure 1: Training or recruiting? Pupil-teacher ratios and proportion of teachers with an ISCED 2 qualification as highest educational attainment, ISCED 1, by ADM1, selected countries**

![Graph showing pupil-teacher ratios and proportion of teachers with an ISCED 2 qualification as highest educational attainment, ISCED 1, by ADM1, selected countries.](image)

Source: UNESCO Institute for statistics, Asian regional module on teachers, pilot survey

**Raising the quality of teachers; teachers’ qualifications**

While there are mitigated conclusions regarding the role of teachers’ highest educational qualifications on student achievements (Diop, 2011; Fehrler, Michaelowa, & Wechtler, 2009; Hanushek, 2003), a number of countries actually aim to improve teaching quality by setting higher qualifications standards for the recruitment of teachers. This is the case for instance in Bangladesh (UNESCO, 2014) or Lao PDR. This is interesting as it might indicate that national definitions of teaching quality or teacher effectiveness does not only include students’ achievement, and as such should be recognized and supported by the international community. If a country is willing to achieve such development, how far from its own goal might it be? And if the country was willing to achieve levels of educational qualification similar to recent reforms in the US requiring a bachelor degree (U.S. Department of Education, 2004), or even Finland requiring a master degree (Darling-Hammond & Rothman, 2011), what additional efforts are needed? When can this be achieved? These questions require internationally comparable data to be answered. As an example, data collected for Lao PDR show large differences between the 17 provinces if the country were to try and raise the minimum qualification to become an ISCED 1 teacher. While Vientiane, the capital city, is already almost there,
amongst the poorest provinces, some have a long way to go with still more than 80 pupils per qualified teacher as with the example of Houaphan (Figure 2), and this, despite similar levels of pupils per trained teachers according to the current national definition.

**Figure 2: Raising teachers’ minimum qualification to ISCED 4 in Lao PDR, number of pupils per teacher, trained teachers (national definition) and qualified teacher (ISCED 4 or more)**

Source: UNESCO Institute for statistics, Asian regional module on teachers, pilot survey

Provide the right incentives to retain the best teachers; ensuring the professional status of teacher

Again, there are mixed evidences on the difference in performance between contract teachers and regular teachers and while the recourse to contract teacher is a good short term solution to cope with current teacher shortages, it is unlikely to meet the long term needs to extend the quality of education as these teachers usually have lower salaries, less stability and even have different rights in some countries (UNESCO, 2014). Ensuring that this is well taken onboard is also critical and the UIS regional module in Asia is one, if not the first, international education data collection that is looking at this issue at the sub-national level.

Enhancing the management of the teaching force; age, gender, teaching experience and attrition

Efficient management of the teaching force implies estimating where future needs might be, especially with respect to attrition or in-service training. Additionally, looking at the gender distribution of teachers by region is another feature of the UIS module and serves the purpose of monitoring the representation of both male and female in the teacher workforce.

2- Preparing the monitoring of upcoming post-2015 agendas

The international development community is embarking on a new journey to define and commit to achieve a set of development goals. Together with other dimensions of development, education is at the heart of the debate and proposals have flourished over the past year. While the new international agendas have yet to be adopted inequalities have, (re-)emerged as particularly important because 1) the failure to tackle the issue at the national and international level is held responsible for the current stalling of progress (Global Campaign for Education, 2013; Paxton, 2013; UN System Task Team on the post-2015 UN Development Agenda, 2012b) 2) and social justice
concerns are growing and the public is pressing for political mobilisation in that regard (UN System Task Team on the post-2015 UN Development Agenda, 2012a; Watkins, 2013). At the same time, the explicit recognition of the role of teachers in producing quality education is turning the spotlight, and therefore international and regional monitoring needs, on areas that have been fairly neglected so far in the production of internationally comparable education data.

Current proposal for the Sustained development goals includes in its goal 4; “Ensure inclusive and equitable quality education and promote life-long learning opportunities for all”, a specific target on qualified teachers “4.c by 2030 increase by x% the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially LDCs and SIDS”. In general, the extension of the education goal to secondary education and the focus on quality and equity has some implications for the monitoring of the teacher workforce at the national and international level. This is actually reinforced by the introduction, for the first time, of an explicit goal regarding national and international monitoring of development; Goal 17 “Strengthen the means of implementation and revitalize the global partnership for sustainable development” and its sub-goals 18 and 19 on data and monitoring (Open Working Group on Sustainable Development Goals, 2014).

In Asia, evaluation of the EFA Mid-Decade assessment (EFA MDA) revealed that the lack of data was a critical issue in the region together with uneven analytical capability. Descriptive analysis and interpretations of findings can still be improved by a large margin at every level; international, regional and national. Among national reports produced for the EFA MDA, few included analysis at the sub-national level. This was acknowledged as one of the gaps in these assessments. Regional EFA MDA reports generally discussed inequalities but little data was brought forward to support the argument in a regular and consistent way and there is a general lack of comparability at the regional and international level when the data is used (Martin Jenkins, 2010). The focus of the EFA MDA was generally too broad and prevented from digging deeper in areas which are of particular concern to the region. These included (but are not limited to), quality of education (including teachers), disparities, education expenditures and private education. The particular exercise of assessing progress towards EFA ought to be a simple sub-product of the regular monitoring of education systems and the lack of consistency in the exercise and the uneven quality of data submitted highlighted a more global issue of statistical capacity at the regional level be it either in data collection or analysis of the data. While there has been progress since the EFA MDA, Asia-Pacific has yet to achieve the data revolution that would enable the region sound monitoring and evaluation of the teacher workforce. UIS survey on teachers is one step towards such a revolution as it produces for the first time internationally comparable education data at the sub-national level from administrative sources. However, success of the regional module can only be achieved by relying on effective national statistical systems in the region and, while promising, response rates to the pilot survey indicate remaining issues in the monitoring and evaluation of the teacher workforce (Annex 1).

References


## Annex 1:

Response rate by country and items, pilot survey on teachers at the subnational level

<table>
<thead>
<tr>
<th>ISCED Level</th>
<th>Cambodia</th>
<th>Lao PDR</th>
<th>Nepal</th>
<th>Viet Nam</th>
<th>AVG</th>
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