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Teacher Shortage in the Arab World: Policy Implications

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Abstract

Recent empirical studies in the field of education have revealed a significant shortage of teacher labor force worldwide, the scarcity of which is expected to yield negative results in making primary education accessible to all children, and in meeting the educational goals of the 21st century. The following study specifically focuses on the Arab region, and draws from data collected from different sources, primarily UNESCO and the UNESCO Institute for Statistics, to highlight the shortfall of teachers in the region. It then proposes possible reforms in educational policies, and initiatives to counter this growing challenge.

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Introduction

In the Arab world, there has been increased awareness on the instrumentality of education in fostering human and economic development (e.g. Yamani, 2006), and a realization that quality education contributes to the economic growth of a society and its overall human development (Barro & Salai-Martin, 2003). Consequently, in recognition of a dire shortage of teachers, policy makers and different stakeholders throughout the Arab world are strongly investing in teacher's enrollment in a bid to secure access to basic primary education and literacy for all (Hammound, 2005).

Making headway in this field is the UNESCO Institute for Statistics (UIS, 2006), which has methodically investigated teacher shortages around the world, and developed indicators to assess the quality of teaching practices, the educational policies in place to counter the shortage of teachers, and the way that these factors relate to students' academic achievements. UNESCO's 2010 Global Monitoring Report has echoed increasing concerns that the shortage of teaching professionals worldwide is inhibiting the attainment of Universal Primary Education (UPE) by 2015, a global campaign advocated by UNESCO's Education for All, and the United Nations Millennium Development Goals (Bruns & Rakotomalala, 2003).

With the rising number of students enrolling in primary education, and the inadequate funds allocated by governments and states to the education sector, the picture looks grim. UNESCO's Institute for Statistics office has previously estimated the need of no less than 1.6 million teaching positions worldwide to warrant quality education by 2015, with that number rising to 3.3 million by 2030 (UIS, 2013).

Teacher shortages have negative impacts on primary school children accessing education. They can also push schools to lower their academic standards when recruiting teachers, in their quest to fill the gaps that result from teacher turnover and retirement (National Commission on Teaching and America's Future, 1997). Hence, understanding the underpinning reasons behind a lack of teachers, a phenomenon particularly prominent in the Arab region, is pivotal.

This paper investigates the scarcity of teachers in the Arab world, the underlying causes behind such an acute educational challenge, the policy implications, and the possible interventions. To do this, it heavily relies on data collected and analyzed by the UIS, the primary source of data in this field, and one of the few available reliable agencies observing and monitoring teacher staffing. Due to a lack of clear empirical findings that

examine the reasons behind teacher shortages in the region, references will also be made to previously established conceptual paradigms that examine this phenomenon.

Empirical Findings

Studies examining the scarcity of qualified teachers have primarily attributed this educational challenge to three obstacles: burgeoning school age population, teachers reaching retirement age, and challenges in teacher retention (Darling-Hammond, 2000). Like many countries worldwide, in the quest to achieve universal primary education, the Arab world is struggling to supply enough qualified teachers. Over the past few decades, many studies have warned of a possible crisis that the field of education is – and will – encounter unless better policies and interventions are designed and implemented (Weaver, 1983; Darling-Hammond, 1984). The lack of empirical representative data on qualified teacher's shortage to date, however, has prevented an in-depth understanding of the repercussions of teachers' shortages, deterring the development of appropriate policies and practices that tackle the supply and demand side of teachers. At present, the general shortage of teachers across the entire educational spectrum is also overshadowing other critical emerging gaps such as shortcomings in specific teaching subjects (especially mathematics, physics and business) and a noted shortage in school administrators (Grimmett & Echols, 2000).

Reaching the set goals of ensuring primary education for school children remains the prime responsibility of governments and education authorities. UNESCO has recently provided figures for the number of teachers needed to meet the anticipated learning goals and access to education by 2030. According to UIS statistics (UIS,2013), for the Arab World to achieve UPE in 2030, the total number of teachers needed in the classrooms and schools is 213, 000 in 2015, 345, 000 in 2020, 399, 000 in 2025 and 454, 000 in 2030, in addition to filling the vacancies that result from teacher attrition. Due to staggering population growths, and growing school age populations, the Arab world is facing a chronic shortage of teaching positions, a situation calling for immediate national, regional and institutional policies that ensure better access to education and quality teaching.

Standing behind only sub-Saharan Africa, Arab states are expected to introduce 500, 000 new teaching positions and fill about 1.4 million vacancies that will result from retirement, illness and high offset attrition rates (UIS, 2013). Complicating the situation are estimates that by 2030, Arab states need to accommodate an additional 7.7 million

children in primary education (UIS, 2014). Extensive studies measuring the impact of a shortage of teachers in economic terms are lacking, but in a recent study (Alliance for Excellent Education, 2014), teacher attrition rate was estimated at around 2.2 billion US dollars annually.

There are however some positive trends in sight. The latest projected data indicated that Mauritania and Yemen are expected to close the teaching gap by 2015, with Mauritania aiming for an anticipated 40 pupils per teacher. Palestine is also expected to meet the need of more teachers in 2015, with a ratio of 24 students per teacher (UIS, 2014), but it will not reach the goal of providing primary education for all school age Palestinian children until 2023. Djibouti, on the other hand, will fail to meet UPE even after 2030, due to the high rate of school age children who are not enrolled in primary education. Its teacher gap is expected to be met after 2030 with estimated 34 students per teacher.

Overall, Arab states will need to introduce an estimated half a million teaching positions, in addition to those that have to be filled as a result of attrition in the workplace. While most Arab states have failed to reach the goal of universal primary education by 2015, policy makers in the region have started to make noticeable progress towards meeting educational goals. For example, recent figures indicate that the Arab states expenditure on education is estimated to be around 18.6% of total governments' spending, compared to 14.2% for the global average (Melly, 2013), a remarkable increase from the previously estimated allocation of 5.4% of the Gross National Product on education, which matches the expenditure on education in North America, and which is higher than the global average estimated at 4.9% (UNESCO, 2000).

Investment in the education sector in the region is expected to increase even further. In 2011, Arab states spent 4.8% of their Gross National Product GNP on education and 18.1% of their total government expenditure, these numbers are now expected to rise to 6% of GNP and 20% of total expenditure in order to meet the new Education for All goals (EFA, Global monitoring Report, 2013-2014). Still, pouring more investment in the education sector, including schools, universities and vocational training centers, does not necessarily lead to better performance, nor does it lead to achievement or improvement in access to education. Countries like Jordan, Saudi Arabia, UAE, Oman and Kuwait have significantly increased their budgetary allocations towards improving education access, yet, further investment is needed towards quality teacher

recruitment; continuous training and research; and teacher practice to ensure quality education.

That recruiting qualified teachers will have a positive impact on student achievement is proven (Borman & Kimball, 2005). To illustrate, different studies indicate that teachers that have obtained specialized degrees and certificates in their teaching subjects attain higher students achievement rates compared to those who are not qualified in the specific subject they are teaching. Failing to fill teaching positions, or recruiting unqualified teaching staff, will eventually result in perpetuating unequal learning outcomes, in addition to contributing to lower enrollment rates of children into primary schools. For example, across the region, by 2010 there were an estimated 5 million children out of schools in the whole 22 Arab states (UIS, 2012). On the other hand, Arab states are progressing with primary ratio of 89% in comparison to 79% in 1999 particularly in Morocco where out of school age children dropped by 68% between 2006 and 2011 (EFA, Global monitoring Report, 2013-2014).

A lack of empirical and comparative studies that tap into the relation between shortage of qualified teachers and unequal education in the Arab region makes it difficult to devise appropriate policy interventions. This study relies on data collected by UN bodies in an attempt to spotlight the repercussions of the existing, and anticipated, “epidemic”. Given the criticality in ensuring access to education to school age populations, and the need to close the gaps between high vs. low achieving countries, the thesis under investigation would need further theoretical and empirical investigations in order to solidify a policy discourse. There is however profound evidence of an imminent need to devise policies, on different levels, that safeguard access to education and quality learning, and, in turn, to ensure these educational policies feature high in national agendas

Policy Interventions

One fundamental step to tackle the shortage of qualified teachers is to establish national and regional comprehensive and representative data collection centers that cover school staffing, attrition rates and demand/supply of teachers. In the United States, for example, the launching of the School and Staffing Survey (SASS) and Teacher Follow Up Survey as a data center, facilitated the studying of this phenomenon from empirical and theoretical standpoints. The primary function of such a center would be to provide empirical and methodological examination on why professionals are

abandoning their teaching profession; the rate and age of retirements; teacher recruitment and the supply and demand balance; and the quality of prospective teachers graduating from different education schools. This, in addition to embarking on deeper empirical and systematic data gathering endeavors and analysis on teacher shortage in specific academic subject areas including Mathematics and Science (Ingersoll & Perda, 2009), special educational needs and discernably English as a Foreign language (Al-Hazmi, 2003).

Notably, compared to other students across the globe, students in the Arab World have underperformed in international standardized exams, and the reasons have been attributed to ineffective teacher training programs (Chapman & Miric, 2009). In fact, Arab students' underperformance is evident despite the increasing expenditure on education by Arab governments (UNDP, 2002). Whereas it would be easy to assume that the reason behind this underperformance is primarily related to a lack of teachers, in fact, placing inefficient teachers in the classroom is nearly synonymous with having insufficient teachers. For one reason, employing or appointing incompetent teachers causes unnecessary financial burdens, wasting the budget allocations of governments and school authorities. Second, teachers who fail to implement successful teaching practices contribute to the lowering educational outcome of students' performance. Merely filling classrooms with "teaching staff" does not guarantee that students are receiving a good education. Policy makers and education stakeholders should thus clearly outline the educational and professional requirements of filling teaching positions in order to avoid inversely affecting the quality of education by placing unqualified teachers in classrooms.

An approach to overcome the above challenges would be to promote educational programs that adequately prepare qualified teachers, and equip them with the needed skills to undertake teaching positions in schools. The lack of studies that comprehensively survey the enrolment rate in teaching programs means we have little insight on the status of teacher preparations programs in the Arab World and lack empirical and theoretical context to examine the available programs, and assess whether these meet the increasing demands of the teaching profession. Investigating the causes and consequences of teacher shortages requires the establishment of national and regional research centers to oversee the particulars of teacher shortages in relation to demographic changes, the supply of quality teachers and the resources available to reward and retain them in the national workforce.

Internationally, similar approaches have yielded positive results and contributed to decreasing staffing problems in schools. For example, in one study, it was concluded that teachers who have graduated with extensive preparation coursework and practical experiences are more likely to enter and stay in the teaching profession (Darling-Hammond, 2000). This would suggest that setting up additional teacher education colleges might increase the supply of qualified teachers and counterbalance the scarcity that is observed in the field. Another example is again found in the United States, where different policy and legislative initiatives have been aimed toward promoting high expectations for teaching and learning practices, targeting and remunerating potential students wanting to enter the teaching profession, and providing ongoing professional development programs for qualified teachers in order to graduate trained, certified and licensed teaching workforce (Hirsch, Koppich & Knapp, 2001). In short, preparing a sufficient number of qualified teachers to balance the reported lack of teacher supply is both a national and a regional priority if wanting to meet the objective of providing primary education to all and meeting the goals set by the different organizations.

Teacher Turnover

Teacher shortages have also been linked to teacher attrition (Shen, 1997, Macdonald, 1999, Borman & Dowling, 2008). Often, low turnover rates can be deemed beneficial and constructive to organizational structure and productivity. On the other hand, different empirical findings indicate that a school staffing problem is directly associated with excess in demands that results from a “revolving door”, characterized by teachers leaving the teaching profession for reasons unrelated to retirement at the end of service (Ingersoll, 2001). For example, in one study, researchers have observed that around 40% of teachers who have practiced for more than five years leave the teaching profession as a result of lay-offs, reorganizations, restructuring, school closings and personal circumstances (Ingersoll, 2003).

Simply increasing the number qualified teachers to counterbalance the rise of school age children will not solve the problem of teacher shortage if these newcomers are likely to leave the job for known or unknown reasons. In the United Arab Emirates, for instance, a country that largely relies on foreign teachers, the high number of teacher attrition resulted from first, personal factors (stress, increased responsibilities and accountability, student discipline) followed by economic and sociocultural factors (Al Kaabi, 2005). According to one review, teacher attrition was in fact considered to be the prime obstacle hindering quality education in the UAE (Gardner, 1995). Noticeably, the primary reason behind teacher attrition is personal circumstances, which seems peculiar

to the specific educational culture of the UAE. Compared to similar studies that targeted teacher attrition rates, different factors have been noted to contribute to the observed phenomenon including salary incentives (Ruthland, 2001; Theobald & Gritz, 1996), accountability and the perceived low status of the teaching profession (Tye & O'Brien, 2002) and lack of training (Stinebrickner, 2001, 2002).

The educational culture and the social environment within which schools operate has profound implications on teacher attrition. A more systematic approach in collecting and analyzing data that is sensitive to the context of the region is needed, one which focuses on characteristics of teacher workforce and cultural factors that influence their professional decision making. In addition, some of the organizational studies that have examined employee turnover have mostly focused on the determinants whereas its consequences have been ignored (e.g. Griffeth, Hom & Gaertner's 2000). For example, Hutchinson, Villalobos & Beruvides (1997) have concluded that "while there is an immense literature covering the subject of personnel turnover, there is a paucity of writing on the impact of turnover on the organization" (p. 3202). Hence, interventions that aim to control teacher's migration to different occupations should focus on considering salary raise and classroom size reduction to positively impact teacher retention in addition to providing induction and orientation programs for teachers who are beginners (Smith & Ingersoll, 2004). Similar conclusions suggest that controlling teacher attrition and migration lies on two continuous but different policy dimensions: first organizational and second national.

First, initiating organizational and structural changes that aim at improving communication, familiarizing teachers with schooling and the educational system and engaging them in decision-making processes helps to decrease or maintain teacher turnover. In the same vein, improving teacher recruitment strategies plays a critical role in attracting professional practitioners from different regions and countries by licensing teaching certificates after careful scrutiny. Also, providing financial and monetary incentives for newly hired teachers could have a positive impact on their career satisfaction, although the real correlation between benefits and satisfaction is weaker than assumed (Whitener, Gruber, Lynch, Tingos, Perona & Fondelier, 1997).

Second, introducing organizational restructuring might fall short in countering teacher shortages; hence, national and regional policy initiatives should supplement intervention plans first by motivating teachers through stabilizing and unifying their salary scales, safeguarding their rights and redefining the role of teacher unions in upholding teachers' concerns and demands. Teacher preparation programs should also be adapted

in order to suit the needs of potential candidates in terms of financial and geographical needs of each area, city and region. In other words, policy makers in the Arab world would benefit from designing and implementing professional development programs and training opportunities to specific population of teachers that aim to teach in areas with low number of school staff.

In addition, empowering prospective teachers from minority groups who plan to be employed in schools with specific populations can contribute to filling the gaps in the teaching bodies and meanwhile preserve and enrich the educational diversity in schools of different regional, religious, and socio-cultural backgrounds (Hirsch, Koppich & Knapp, 2001). The same policy initiatives can be applied to geographical regions that experience significantly low teaching staff due to economic and social reasons. For example, Monk (2007) observes that compared to schools located in metropolitan cities and suburban areas, schools in rural areas have high turnover of teachers, whereas they accommodate lower number of trained teachers in the classrooms and receive lesser fiscal compensations and benefits due to the small size of its mobile population and nature of the economic activities of its residences. Applied to the Arab world, it is expected that by 2020 40% of the Arab population will continue dwelling in rural areas which poses new challenges to the school population of those regions in terms of providing access to education, quality teaching and learning and filling the increasing professional teacher gaps (Rashad, 2000; ESCWA, 2000).

Maintaining and retaining qualified and competent teachers in rural areas is yet another challenge for educational policy makers and different stakeholders that requires strategic thinking, at par with closing and balancing rural-urban economic disparity and unequal-income. On the other hand, a more applied, cost-effective and practical policy is likely to yield swifter results, especially initiatives that focus on providing continuous professional development opportunities in urbanized areas, establishing teacher scholarship funds for rural schools, introducing modern technology and web-based learning into classroom environments to raise student's achievements, and work towards retaining the teaching workforce.

Conclusion

The challenge in meeting the UPI goals for 2030 rests on both the quantity and quality of teacher workforce. With the rapid growth of school age population, Arab states are particularly vulnerable to difficulties with school staffing. Training and certifying quality

teachers aims, first, at eliminating illiteracy rate and providing open access to education for children within school-age population, and, second, enables the setting of the foundation of knowledge economy that is consistent with the demands of local and international business markets. Further empirical research is needed to highlight the teacher gap in the Arab world, especially when bearing in mind that the underpinning reasons for this gap also depends on the specific environment. For instance, in the United States explaining teacher shortage in the preretirement teacher turnover rates, and accordingly tackling the staffing problem, predominately hinges on examining the preretirement turnover (Ingersoll, 2001, 2003). Similarly, by studying the adequacy of qualified teacher preparation programs and licensing bodies, policy makers can understand the flow of teaching forces the different countries, and accordingly evaluate and manage teacher preparation departments in higher education institutes thus balancing the demand and supply side of the workforce to provide access and quality education to school age population.

Finally, pinpointing the underpinning reason of teacher shortages requires specific methodological investigation that includes analysis of data from school districts, reports of teachers who quit the profession, and analysis of regression models. Consequently, investigating the relationship between qualified teacher insufficiency and academic performance of Arab students should receive more critical attention due to the fact that previous studies indicate that teacher qualification considerably impacts students' academic achievement (Darling-Hammond, 1999; Goldhaber & Brewer, 2000). In order to maintain a policy framework that balances teacher supply and demand based on educational market changes, policy makers should aim at providing coherent infrastructure of recruitment, preparation, and support programmes that connect all aspects of the teacher's career continuum into a teacher development system that is linked to national and local educational goals (Darling-Hammond, Berry, Haselkorn, and Fidler, 1999)

Limitations

Although meeting the needs of the educational market and overcoming the challenges of staffing is ultimately a national priority, further comprehensive studies that examine the specific subjects requiring additional teacher preparation programs are urgently needed. Policy makers should analyze potential staffing difficulties in specific academic subjects (such as English, Mathematics and Science) in accordance with the demands of the Arab world's economic systems, in order to develop and maintain a knowledge economy that can thrive in the 21st century.

Second, a major limitation in investigating teacher shortages in the region also lies in the exclusion of foreign teachers when estimating the shortage of teaching workforce in Arab countries. There is to date a lack of systematic studies that examine the number of foreign teachers in the Arab world and their influence on the supply-demand balance of teacher workforce, specifically in the Gulf, a region that often relies on expatriate teachers. Educational analysts and stakeholders need to consider the trend of hiring foreign teachers, and policy initiatives aiming to tackle teacher shortage challenges should highlight the overreliance on non-national, foreign teachers.

Finally, in future research attempts, priority should be given to investigating the quality and the competence of teachers and look into developing their skills and knowledge, since providing quality education does not only hinge on staffing schools with adequate teachers, but also on laying an educational infrastructure that focuses on preparing, recruiting and retaining competent educators. New challenges in need of tackling include investigating instruction strategies in the classes, student's conceptual understanding and mapping, inquiry based learning, classrooms discourses, higher order thinking as well as reviewing national curriculums and designing its scopes and sequences.

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