Leadership in education

Educational Leadership, Governance and Gender: A Multi-country Stakeholder Study on Quality Education and School Effectiveness

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ABSTRACT

Effective leadership, both within schools and at the political level in the education sector, is widely recognized as critical for strengthening teaching practices and improving learning outcomes. Despite this recognition, there is a gap in research comparing the perspectives of teachers and leaders inside the school system with those outside. Disagreements among key stakeholders regarding the definition of education quality and its relationship with specific input factors can hinder the progress of education reform. While numerous studies focus on the role of school leadership—primarily principals—the contributions and perspectives of other key stakeholders in the education system have often been overlooked.

This paper addresses this gap by examining the beliefs and perceptions of three distinct stakeholder groups—teachers, principals, and policymakers—across multiple dimensions of education quality, including the attributes of effective schools, principals, and teachers. In addition, we explore perceived barriers to quality education and the factors critical to improving student learning outcomes. We also investigate whether stakeholder perceptions differ based on their role, gender, and cultural context.

Our stakeholder analysis is based on qualitative and quantitative data collected through a purposefully designed survey conducted across four countries at varying stages of educational development: Malaysia, Pakistan, Jordan, and Nigeria. Through our analysis, we differentiate between support for leadership and governance-related measures and commonly perceived correlates of education quality, such as increased budgetary allocations and enhanced physical infrastructure.

Furthermore, we contribute to the understanding of gender disparity in educational leadership, drawing on secondary data to examine the underrepresentation of women in leadership positions across the four study countries. However, our in-depth analysis of stakeholder perception data reveals no significant gender-based differences in the understanding of effective leadership. Finally, our review of country-specific policies and secondary data highlights significant gaps in legislation and political support for promoting women into educational leadership roles.

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1. Introduction

The *Education 2030 Framework for Action* includes among its recommendations to 'strengthen school leadership to improve teaching and learning' emphasizing the need for greater involvement of communities, young people, and parents in school management[1]. It acknowledges that teachers can enhance student learning "with the support of school leaders" and need "time and space to collaborate with colleagues and school leaders." Additionally, the framework highlights the role of educational institutions in preparing future leaders. Beyond school leadership, it urges governments to "sustain political leadership on education," ensuring a transparent and inclusive process with key partners. The document also stresses the need for stronger leadership, coordination, and synergy within governments to integrate education into broader socio-economic development frameworks. However, the significance of leadership in education remains underappreciated, presenting both opportunities and challenges that this report aims to explore.

Educational leadership also matters for the debate on the low education quality in developing countries. The consensus view is that increased budgetary allocation alone is not enough quality of education. What matters is how schools are governed and how necessary incentives are created for teachers and students to prioritise learning activities. At the heart of the black box of quality education lie a range of governance factors that are poorly understood for developing countries. Countries that perform low in education are often also those that rank unfavourably in state capacity and corruption rankings. In some countries such as Nigeria, educational development has been historically undermined also because of weak political leadership (Ezegwu, Okoye and Wantchekonpalo, 2023). A number of recent studies have therefore emphasised better integration of leadership, governance and management issues in the education sector to address the challenges of poor access and quality of basic education (Muralidharan and Singh, 2020; Crawfurd et al. 2021; Cilliers et al., 2021; Hwa and Leaver, 2021; Ezegwu, Okoye and Wantchekonpalo, 2023).

In this connection, a specific challenge is gender inequality in educational governance. While women in most countries dominate the teaching workforce, their presence in leadership roles is limited. The issue of equity and fairness aside, leveraging female agency in educational governance has instrumental value as suggested by studies on the benefits of female leaders in social services delivery (Bergmann et al 2022; Bush et al 2022). In this context, documenting gendered differences in perceptions of school leadership and education quality is important. To this end, we offer a comparative analysis of four countries that are at different stages of educational development -- Pakistan, Malaysia, Jordan, and Nigeria, by drawing upon a rich primary dataset that we have collected between 2017 and 2018, secondary and administrative data and desk review of policies.

The main objective of the study is to analyse the perception and correlates of effective school leadership with a focus on gender. Secondary objectives include understanding how leadership-gender nexus varies by levels of education

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[1] https://unesdoc.unesco.org/ark:/48223/pf0000245656/PDF/245656eng.pdf.multi

and country context. As a by-product the analysis also helps understand potential sources of opposition and support towards leadership focused school reforms. The research is in the broad area of "leadership within education institutions" and is expected to contribute to at least two highlighted GMR thematic areas: (i) school leadership roles and standards (and how this links to governance and accountability regimes) and (ii) "teachers, community and school leaders".

The rest of report is organized as follows. Section 2 reviews existing legislation and policies relevant to education leadership in our four study countries. Section 3 reviews the related academic and policy literature. Section 4 examines and compiles existing secondary data on female leadership in education. Section 5 describes the data, methodology and findings. Section 6 discusses the policy implications while Section 7 is the conclusion.

2. An Overview of Legislation and Policies Relevant to Education Leadership

This section starts by identifying all relevant legislations and policies and highlight specific policy/legislative provisions, or the lack thereof, to boost gender equality in educational leadership positions. To situate the discussion in the larger context, the review starts by examining policies in terms of general affirmative actions to ensure women's representation (e.g. electoral quotas, legislated candidate quotas, and similar reservations and quotas) at various levels. Then we specifically look at the provisions for educational leadership for women and associated barriers. The following discussion is organised by countries.

NIGERIA: The government launched the National Gender Policy of 2006 mandating a 35% quota for women for the elective political positions as well as in the public service appointments. Despite this, as of 2023, the representation of women in the upper and lower chambers of government remains disproportionately low (Nkereuwem, 2023). With the introduction of new national gender policy for the period 2021-2026, there is now a renewed focus on the principles of Gender Equality, Empowerment of Women and Social Inclusion (GEESI), particularly in the governing institutions. A 50% quota has been introduced for women in elective and appointive leadership positions within the system of political parties and for candidates selected for political offices.

To ensure effective policy implementation, a National Gender Strategic Framework/Plan (NGSF/P) has been devised. The national gender policy 2021 also ensures that Independent National Electoral Commission's (INEC) gender policy is legally responsive on the political parties. At the community level, however, no specific mention of any provision in form quotas/reservation for females is made.

In the context of education, the federal, state, and local government agencies govern schooling and staff recruitment in Nigeria. The priority is to improve the educational standards. The Education for Change (2018-2022) report presents an Action Plan to enhance quality of teachers and school leaders including head teachers, supervisors, and principals in basic education schools by March 2019. The National Gender Policy on Education 2021 also emphasises on this priority to promote gender responsiveness at post-basic schools and junior secondary schools. In context of junior secondary schools, the said balance in the governance and administrative structures is to be achieved by 2025 and for post-basic education, the policy aims at achieving gender balance in recruitment of teachers and principals for post-basic schools by 2030. The Nigerian Universal Basic Education Commission's standards for recruitment mention various mandatory, ideal, and optimal conditions. However, there is no mention of reservations for females in leadership positions. Teaching experience (e.g. at least ten years of service in the case of secondary schools) is the main criteria in the recruitment of school leaders as well as promoting teachers to the leadership positions such as that of school principals (Arikewuyo 2009, Olayiwola 2014). The process of recruitment is managed by institutions such as State Teaching Service Commission (TESCOM) and State Universal Basic Education Board (SUBEB) (Olayiwola, 2014). Gender identity and administrative qualifications are not currently considered for leadership positions in the secondary school system (Arikewuyo, 2009). The appointment of school principals also lacks clear guidelines, potentially compromising the quality of school leadership (Olayiwola, 2014). In the case of private schools, hiring of school heads are not mandated to have any leadership or administrative qualification, but are left to local community actors to recruit qualified individuals as school principals for which they favor individuals with diplomas or master's degrees in educational administration (Olayiwola, 2014).

JORDAN: Over the years, the government has introduced various quotas to enhance female representation in leadership positions (IEMed 2018). In 2003, 15% seats were designated for women in the Lower House of Parliament (UNWOMEN 2019). In 2015, the Decentralization Law (Decentralization Law No. 48) stipulated that for the Governate Council, 10% of seats must be reserved for women (IEMed 2018). Additionally, the law mandates that the Council of Ministers appoint at least 15% of elected Governate Council members based on the Minister's recommendation, with one third of this allocation designated for women (Decentralisation Law, Clause D of Article 6) (ibid).

In 2007, Jordan revised its Municipalities Law to introduce a 20% quota for women in municipal councils, which was subsequently increased to 25% in 2011 (OECD, 2018). The most recent Municipalities Law (Law no. 41/2015), ratified by Parliament in August 2015, restructured municipal governance, establishing directly elected local and governorate councils alongside municipal councils. This law maintains a 25% quota for women at the level of local and municipal councils and introduces a 10% women's quota for governorate councils (ibid).

However, affirmative action seems to be disproportionate in terms of their adequacy to represent women as per their strength (OECD, 2018). There are no quotas set for women in the procedures governing the composition of the decision-making bodies such as the permanent bureau, blocs, or standing committees of the Senate and the House of Representatives (UNWOMEN 2022).

When it comes to electoral or political party laws and executive instructions for elections, there is no explicit mention of gender, nor are there quotas for party leadership or electoral lists (OECD, 2018). According to the OECD, barriers to promote women's leadership are beyond just the political domain; they are marred with deficiency in specific measures in the guiding policy on Human Resources Management (HRM) aimed at facilitating the recruitment of women or other measures to increase female representation within the Secretariat. Furthermore, there are no specific measures established to ensure gender parity across all levels of the organization (OECD, 2018).

In the education sector, women largely dominate, and most of the school and kindergarten principals are women (ILO, 2021). However, leadership positions other than that of school principals presents a different picture. In the Ministry of Education, men predominantly occupy senior leadership positions, reflecting cultural stereotypes that limit women's roles to teaching or school heads/principals, rather than being superintendents (Abu-Tineh and Al-Qassim, 2012). Various policy interventions to induce gender equality over the years have not trickled down to other social and economic aspects of life (Edres, 2022).

As for appointment of school leaders, the teaching and non-teaching staff are selected and appointed at the central level and their deployment is overseen at the central and regional positions by the Ministry of Education (MoE) and Directorates of Education (DoE) (SABER, 2015). As per the Article No. 73/2014 of the Civil Service System Law, the DoE at regional levels manages the selection, evaluation, tenure, and transfers of the school principals (ibid). Almost for a decade, school principals have been recruited based on a minimum of five years of teaching experience with a university degree, at least a degree of a year specializing in school leadership and administration (TIMSS, 2019). While our review did not find specific provisions for mandatory representation of women in school leadership, concerning the UN Relief and Work Agency (UNRWA), a key aspect of UNRWA's Gender Action Plan involves special measures for recruiting female candidates to senior positions (UNRWA, 2021). It aims for 50% of senior area staff positions (Grade 16 and above) to be occupied by women, starting from a baseline of 26% in 2018 (ibid.).

PAKISTAN: At the national (as per Article 51 and Article 106), provincial level (as per Article 51 and Article 106) and within the political parties, there are reservation for women (GoP, 2017). For the elective offices of National and Provincial Assemblies, a political party, must ensure at least 5% of female representation on general seats (GoP, 2017;

Khan, 2024). A total of 17% seats were allotted to women in the national assembly and at the level of local governance (district, municipality, and union council), a 33% quota is set for women (Awan, 2018). There are additional quotas for certain disadvantaged categories, including women for certain positions. However, these provisions differ across provinces.

Turning to the education sector, at the school level, because of the gender-based school segregation, women are eligible to apply for leadership position in girls' school while men in boys' school. However, for schools which are co-educational, 15% statutory quota is suggested for women at the level of each post (GoS, 2021). That said, in reality, schools adhere to the practice of annually recruiting and selecting senior teachers as school principals as a result school principals often lack required training and qualification for the leadership role (Quraishi and Aziz, 2016). For instance, 75% of promotions are based on seniority and past performance, while only 25% are based on other criteria (Quraishi and Aziz, 2016).

For the Sindh province, the recruitment guidelines for teaching and non-teaching staff states specific quotas for respective disadvantaged categories such as physically challenged persons (5%), minority (5%) and women (15%) (GoS, 2021). In the case of co-educational schools, it is mandated to reserve 15% of total number of sanctioned strengths for each post for women (ibid). Review of notification for advertisement on the post of head masters for the Baluchistan Service Commission too confirms recruitment quota for women, but our review could not locate the specific notifications to ascertain the percentage of quota (Baluchistan Public Service Commission, n.d).

For the province of Khyber Pakhtunkhwa (KP), our review of notifications suggests quotas with respect to disability and minority, since all different job advertisements/notifications clearly pertain to male-specific or female-specific posts for schools, encompassing post for school leaders and teachers. However, we could not identify a quota exclusively for females. One explanation could be a lack of co-educational schools at elementary and secondary level in KP.

Lastly, the Baluchistan Education Sector Plan 2020-2025 is a recent policy document to highlight the problem of acute underrepresentation of females in senior management positions, often due to factors such as lack of equal opportunities, unsafe workspaces, and bias towards the leadership abilities of women (Government of Balochistan, n.d.). While specific managerial positions are designated exclusively for females such as head teachers at female schools and District Officer Education (females), roles such as those within the Directorate of Education for school headquarters and District Education Officer (DEO) positions have no specific reservations for women (ibid).

MALAYSIA: In 2004, the government set a target of 30% quota for women as decision makers in the public sector (Daim and Yunus, 2021), extending this to the private sector in 2011 (Ismail et al, 2014) to ensure a minimum of 30% women in decision-making positions at all levels in the corporate sector (UN WOMEN). More recent policy and strategic documents (e.g. Malaysian Education Blueprint 2013-2025 and 11th Malaysian Plan 2016-2020) have also reiterated the need for and priorities set towards female representation in elected legislative bodies (IDEAS 2022). However, as of 2022, only two political parties have adhered to either ensuring 30% of women occupy the leadership positions or to contest elections (Dahlerup et al., 2014). Such quotas subsequently have been adopted by different state legislatures and for different leadership capacities or positions (Kerajaan Negeri Terengganu, 2022; Ahmad Zakuan, 2022). A 30% quota for representatives in the village community management council, known as Majlis Pembangunan Kemahiran Kebangsaan (MPKK) was proposed in the Rural Development Plan 2018-2023 to empower rural women in the decision-making (Ministry of Women, Family and Community Development Report 2014-2019).

Beyond the above, we are not aware of any reservation or quota for women as school leaders and/or other leadership roles within the education system. Since 2013, the Ministry of Education has tried to improve criteria for selecting principals and succession plans by implementing a new career package. This involved shifting from tenure-based selection to leadership competency-based criteria, with measures such as clarifying selection criteria and developing a pool of potential leaders. Additionally, principals must complete the National Professional Qualification for Educational Leaders (NPQEL) at Institute Aminuddin Baki (IAB) before appointment. These changes are expected to lower the average age of principals, enabling longer service periods. The Ministry also established a succession planning process to identify and nurture high-potential individuals for future roles, expanding to include assistant principals, subject, and department heads once the initial setup is complete. Despite these changes, recruitment and promotion criteria for teachers/principals remains the same – regardless of gender-based provisions.

In sum, based on the review of policy literature for Nigeria, Jordan, Pakistan, and Malaysia, we have identified some legislation and policies to promote female leadership in politics and government in our four study countries. While such provisions might have trickled down to social sectors encouraging greater representation of women in decision-making roles, we neither found evidence of systematic provisions for female educational leadership nor gender-specific criteria for promotion to leadership roles within schools, particularly in the case of Nigeria and Malaysia. While in Pakistan and Jordan, we could locate female leadership quota, this is not across the board.

3. Conceptual Framework - School Leadership and Education Quality

In this section, based on the review of the related academic literature, we examine the relationships between leadership (management and governance) and outcomes (in terms of access and quality) with an added focus on female leadership in South Asia and Southeast Asia[2]. As for the specific scope, we have considered studies on school leadership and its direct and indirect correlates such as school improvement, learning outcomes, teaching effectiveness, school accountability and efficiency, governance, and management. Examples of keywords used in identifying relevant studies are "female school leaders", "school head teachers, "school principals", "female school principals", "decentralized management", "school governance", "teaching effectiveness" and "school management". Our search was limited to the period 2000-2023 which coincided with the MDGS and SDGs campaign.

In general, there are at least three strands of the literature on school leadership. The first strand is about a person-centered approach to leadership examining different types of principals (Abdullah and Kassim, 2011; Urick and Bowers, 2014; Tai & Abdull Kareem (2018); Amzat et al. 2022; Marianno & Relles (2023)). Urick and Bowers (2014) differentiate among three types: (i) controlling, frequent principal leadership; (ii) balkanizing, high degree of leadership shared with teachers; and (iii) integrating (motivational), frequent principal leadership. Briefly, the *controlling* style of leadership is hierarchical in approach where the principal exercises strict control over decision-making, policies, and procedures within the school. The focus is on maintaining order, discipline, and adherence to rules. Controlling leaders may prioritise efficiency and standardisation but may also risk stifling creativity and innovation among staff and students. In contrast, *balkanising leadership* is decentralised or fragmented in nature, where power and authority are distributed among various factions or departments within the school. Each department or group may operate independently, leading to silos and limited coordination. While this approach may empower individual departments, it can result in a lack of cohesion and alignment toward common goals across the school. Lastly, *integrating leadership* focuses on fostering collaboration, cohesion, and a sense of shared purpose among all stakeholders within the school community. The principal acts as a facilitator, bringing together teachers, staff, students, parents, and community members to work collaboratively toward common objectives. Integrative leaders prioritise communication, teamwork, and shared decision-making, fostering a culture of inclusivity and collective responsibility.

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[2] A small number of studies in the literature review the existing evidence on educational leadership in developing countries. But these are regional in scope. For example, based on a systematic review of 48 articles, Oplatka and Arar (2017) found that the vast majority of research on Arab educational leadership focused on two aspects: (i) identifying patterns of leadership styles and orientations and the barriers faced by educational leaders in applying some of the leadership models originated in Western scholarship; (ii) on exploring and examining leaders' managerial perceptions and practices both in times of routine and reforms. For Latin American countries, Castillo and Hallinger (2017) conducted a "topographical review" of 48 articles published between 1991 and 2017. Other examples include Hallinger and Hammad (2017) which covers research on Arab societies for the period 2000 - 2016.

In addition to the above, there are additional leadership typologies in the literature. These include *transformational leadership*[3] (Mansor, Abdullah, & Jamaludin, 2021; Karacabey, Bellibaş & Adams 2022), *distributed leadership*[4] (Southworth, 2002; Mullick, Sharma, & Deppeler 2013; Amzat et al. 2022), instructional leadership[5] (Hallinger, 2005; Abdullah and Kassim 2011; Karacabey, Bellibaş, and Adams 2022) and *servant leadership* (Xu, Stewart, and Haber-Curran, 2015).

Beyond the type of leadership, literature has empirically looked into how demographic (e.g. age, gender, experience/tenure) and psychological (e.g. motivation) attributes of leaders predict or shape leadership style and/or the adoption of strategic decision-making modes as well as its contribution to school effectiveness, directly and indirectly (e.g. Gray, 1987; Kruger, van Eck, and Vermeulen 2005; Guramatunhu-Mudiwa and Bolt, 2012 ; Abu-Tineh, 2013; Law, 2013; Xu, Stewart, and Haber-Curran 2015; Chan, Ngai, and Choi, 2016; Shaked, Glanz, and Gross, 2018; Tai and Abdull Kareem, 2019; Campos-García & Zúñiga-Vicente, 2022; Marianno and Relles, 2023).

The second strand focuses on the empirical relationship between school leadership and characteristics of schools (Krüger et al., 2007; Joshi, 2018; George and Mensah,2018; Walker and Qian, 2022; Marianno & Relles, 2023; Cravens and Zhao, 2023)teachers (Printy, 2008;Tashi, 2015; Mullick, Sharma, and Deppeler, 2013; Boyce and Bowers, 2018; Hallinger, Liu, and Piyaman, 2019; Tan et al., 2020; Sakız, Ekinci, and Sarıçam, 2020; Kulophas and Hallinger, 2021; Mansor et al., 2022; Karacabey, Bellibaş, and Adams,2022; Bellibaş and Gümüş, 2023;; ;) and students (Robinson et al., 2008; Leithwood et al., 2010; Chang, 2011; Joshi, 2018;).

The third strand of the literature empirically profiles leadership at school and teacher levels using cross-country data (Bowers, 2020; Veletić and Olsen, 2021). Studies profiling female principals are also limited. Exceptions include Vogel and Alhudithi (2021) who examined the perception of educational leadership in Saudi Arabia and Qatar. Female principals from both countries were found to view teacher supervision as their primary task as instructional leaders,

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[3] Transformational leadership involves inspiring and motivating followers to achieve higher levels of performance and personal growth. Principals who employ this style often articulate a compelling vision for the school's future, empower teachers and staff to take ownership of their roles, and encourage innovation and continuous improvement. Transformational leaders focus on building trust, fostering a positive school culture, and developing the potential of individuals within the organization.

[4] Distributed leadership recognizes that effective leadership can emerge from various roles and levels within the school, not just from the principal alone. This approach involves sharing leadership responsibilities and decision-making authority among multiple stakeholders, including teachers, department heads, and support staff. Distributed leaders empower others to contribute their expertise and take on leadership roles, leading to greater innovation, collaboration, and adaptability within the school.

[5] This can be conceptualized as one that prioritizes the improvement of teaching and learning outcomes as the primary focus of the principal's role. Principals who adopt this approach actively support and coach teachers, provide feedback on instructional practices, and ensure alignment between curriculum, assessment, and instructional strategies. Instructional leaders are deeply involved in monitoring student progress, analysing data, and implementing evidence-based practices to enhance student achievement.

including classroom observations and feedback to the teachers. In Saudi Arania, female principals additionally described providing professional development for their teachers as part of their instructional leadership.

In the remaining part of section 3, we further review the school leadership literature with a focus on (i) gender and (ii) student achievement. We also build on existing review of the evidence (e.g. Sampat, Nagler and Prakash, 2020).[6]

3.1. Gender and school leadership

The literature on gender-based school leadership have investigated several questions such as reasons for women's presence (or lack thereof) in leadership roles and gender specificities of leadership roles. Globally, women are underrepresented as school principals owing to a variety of reasons both on the demand and supply side such as gender-discrimination in promotion (e.g. differential bars set for evaluating female candidates) and self-selection out of leadership/managerial roles because of a lack of self-efficacy perception among female candidates. Turning to the empirical scholarship, Bloom et al (2015) find that female principals are associated with higher management scores. Using data from the World Management Survey, Martínez et al. (2021) confirm female principals to be associated with higher management quality[7]. International evidence indicates significant opposition from male subordinates, inhibiting female progress in leadership roles in schools (Husain, Matsa & Miller, 2023). Altogether, this suggests that under-representation could be owing to gender-discrimination in entry and promotion decisions. Such persistent gender gaps in school leadership can create an intergenerational trap. Fewer role models may keep young girls and the next generation of female educators away from seeking managerial and leadership roles[8].

Turning to the other sub-section of the literature on gender and educational leadership, Gray (1987) provides a conceptual framework for understanding gender-based school leadership. Campos-García and Zúñiga-Vicente (2022) who study principals of 105 Spanish secondary schools find no statistically significant gender-based differences in strategic decision-making among principals even though women are under-represented in leadership positions in Spanish secondary schools. Similarly, in their study on perceptions of leadership in North Carolina Public Schools in the US, Guramatunhu-Mudiwa and Bolt (2012) explored the impact of gender among various roles within school leadership, including principals, assistant principals, teachers (including intervention specialists, vocational instructors, literacy specialists, special education teachers, etc.), and other school-based positions (such as school

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[6] The authors reviewed more than 70 developing country studies in four aspects: (a) The relationship between school leadership and student outcomes; (b) the status of school leaders in education systems; (c) the impact of training programs that aim to improve school leadership skills; and (d) other enabling conditions, such as policies related to the selection, accountability, and autonomy of school leaders, that impact the quality of school leadership and effectiveness of school leadership training.

[7] The authors find evidence of significant demand side (organisation specific) barriers in the form of higher bars for female candidates seeking promotions. On the contrary, factors related to lower self-efficacy perception among women could do not significantly contribute to a gender gap in principal positions.

[8] *https://www.cgdev.org/publication/girls-education-and-womens-equality-how-get-more-out-worlds-most-promising-investment*

counsellors, psychologists, social workers, library media specialists, etc.)[9]. Using a sample of 956 principals (of which 56.9% are females), Xu et al. (2015) find that females score significantly higher than males on emotional healing, wisdom, persuasive mapping, and organisational stewardship. In their study of 358 public school teachers in Egypt, Hammad et al. (2021), found no significant gender-specific differences in teachers' perceptions of learning-centered leadership. In their study on Malaysia, Thien et al. (2021) also do not find gender to have no significant moderating effects on the relationship between distributed leadership and teacher organisational commitment. For Jordan, Abu-Tineh (2012) find no evidence that male and female leaders in schools different in terms of self-evaluation when it comes to leadership effectiveness.

3.2. School leadership and student achievement

For both developed and developing countries, researchers have examined how student achievement correlates with school leadership. Using the 2015 PISA data for the United States, Liu (2021) find teacher leadership in instructional management (under distributed leadership) to be positively and directly associated with student performance. However, leadership is missing in underprivileged schools with disproportional concentration of students coming from minority and socioeconomically disadvantaged backgrounds (). For a sample of US primary schools and teachers, Seashore Louis et al., (2010) find evidence on the positive link between leadership variables and student learning. Among other findings, shared and instructionally focused leadership play complementary roles in improving school performance. Agasisti et al. (2020) examine the impact of managerial practices of Italian school principals on students' outcomes. They find that indicators of managerial practices are positively correlated with outcomes though only with low statistical significance. Stronger associations between management variables and test scores are detected only for low socioeconomic status. Chang (2011) examines the relationships between distributed leadership and student achievement in learning for a sample of 1500 teachers at public elementary schools in Taiwan. The author finds that distributed leadership positively influences academic optimism and indirectly affects student achievement via boosting teacher's academic optimism. Leithwood and Mascall (2008) examine the impact of collective (i.e. shared) leadership on student achievement using a sample of 2,570 teachers from 90 elementary and secondary schools. The study found collective leadership style to explain significant proportion of the variation in student achievement.

Turning to analysis on the effect of principal's gender on student outcomes, there seems to be lack of literature evidence. But available high-quality studies[10], for developed and developing countries, on the effects of female teachers is mixed; a review of studies examining causal relationship (i.e. randomized control trial designs) also indicate mixed results (Evans and Nestour, 2019). Moreover, this assessment does not change when considering research on both learning and non-learning outcomes. Even though for some countries, research show positive impacts of female

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[9] However, the authors did not find gender of the respondent to significantly affect teacher's perceptions of leadership in public schools. Only some differences were noted in specific dimensions -- females employed in instructional and administrative roles scored higher on leadership variables than males, while females scored lower than males in other roles.

[10] High quality refers to research designs that ensures that the observed positive impact of female teacher exposure is not owing to differences in observable teacher characteristics such as age, experience, or educational qualifications.

teachers, it's too early to generalise on given that the available evidence does represent well the low- and middle-income countries.

Lastly, a limited number of empirical studies have used global datasets with unit level records on school-specific stakeholders (e.g. principals and teachers) and linked them with student or school level outcomes to understand the relationship between school leadership and education quality (e.g. Tan 2013; Bellibas and Liu, 2016; Bellibaş et al., 2020). In a large-scale empirical study based on 18,641 school principals from 73 countries that participated in the Programme for International Student Assessment (PISA) 2009, Tan (2013) find that that principals were able to differentiate between strategic (academic focus) and operational (involvement) leadership. Most importantly, principals shifted their leadership priorities when confronted with academic failure of students and when leading larger schools. Principals' leadership was also found to be responsive to parental academic pressure. OECD membership had important moderating influence – principals in OECD jurisdictions reported more involvement than those in non-OECD jurisdictions. In a later large-scale study based on TALIS 2013 data, Bellibas and Liu (2016) report mixed findings on the relationship between leadership styles (instructional versus distributed) and school climate. While principals' perceived (distributed and instructional) leadership practices significantly predict staff mutual respect in the school, leadership styles did not affect school delinquency and violence. In a more recent study, Bellibaş et al. (2020) examines the influence of principal's leadership on teaching practices to reveal direct and indirect effects of instructional and distributed leadership models on teachers' instructional quality, with the mediating effect of teacher collaboration and job satisfaction. This research conducted secondary data analysis using the Teaching and Learning International Survey (TALIS) 2013 dataset collected by the OECD. The results suggested a significant direct effect of principals' instructional leadership on instructional quality, while the effect of distributed leadership was mainly indirect, mediated by teacher collaboration and job satisfaction.

3.3. *Conceptualizing school leadership and quality*

Existing analyses acknowledge that school leadership style differs as a function of cultural dimensions and other contextual features (Brewer et al., 2020[11]; UNESCO, 2016). Some leadership styles (e.g. transformational, instructional, and shared instructional leadership) are prescribed as more or less effective. Regardless of how effectiveness is defined or assessed, conceptually, there is a positive link between school leadership and education quality (learning outcomes)[12]. Ineffective school leadership is associated with underperforming schools, particularly those serving socioeconomically disadvantaged and minority students (Liu, 2021). On the other hand, in under-performing schools, improved governance and effective styles of principal leadership can help address a variety of challenges including that of low student achievement and high rates of teacher absenteeism.

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[11] For a review of the literature on leadership and cultural context, see Brewer et al (2020).
[12] Available reviews report a positive association between the presence of female teachers and student outcomes though no such study is identified specific to female school leaders (Bolton 2019). Based on EGRA 2013 data analysis, Asadullah (2017) report a positive association between learning outcomes and female headship. However, in most cases the coefficient on the female head teacher dummy is statistically insignificant.

The conceptual link between leadership and education quality has multiple dimensions. At an aggregate (institutional) level, effective school leaders play an active role in defining the school's vision and promoting a positive school climate (Ng et al., 2015). At the teacher level, effective leadership boosts teacher's professional development. Given that teacher collaboration is an important predictor of learning outcomes, the leadership style of principals can matter for the delivery of quality education by shaping teachers' work environments and strengthening support for teacher collaboration (Meyer et al., 2020)[13]. This also includes positive impact on teacher professional learning by promoting agency among teachers (Hallinger et al., 2017). Lastly, principals' emphasis on instructional practice and sharing leadership can be hypothesised to play a significant role in promoting the trust, collegiality, and respect among teachers and all of which together improve school quality.

4.Official data on school leadership, education management and governance

In this section, we describe publicly available official data on school leadership, education management, and governance with a particular focus on gender. In addition, we have attempted to compile data on gender distributions of leadership positions of senior staff employed in Ministries of education. When such data is not made available in published report, we have tried to manually extract the data from websites of the Ministries. We have also considered gender-wise leadership positions in non-state institutions (e.g. teacher unions, employer organizations, think tanks, media and academia, local bodies, electoral parties, SMCs). Wherever possible, we have considered segregating the data by school level (pre-primary, primary and secondary). Based on the compiled data, we have commented on how the gender distribution vary across and within-countries.

Although women's under-representation in leadership positions in various sectors is well documented, it is less so in education. Globally, there are two stylised facts about female presence in the education sector. First, women's representation in the teaching workforce over the last two decades has increased. Second, despite this, women remain largely under-represented in school leadership positions. These have been established based on quantitative assessment of female presence in educational leadership for a group of countries. For instance, data from the 2018 TALIS reveals that only 48 per cent of lower secondary school leaders are female versus 68 per cent of teachers (OECD, 2020). As we show in **Figure 4.1**, female leadership is positively associated with women's overall participation in the labour market. Only for a handful of countries such as Brazil, Latvia, Georgia, Romania and UAE, female leadership is higher relative to women's labour force participation rate.

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[13] Using data on 630 teachers in 29 primary and secondary schools in Germany, Meyer et al. (2020) reported evidence on statistically significant though indirect effect of principal leadership on teacher collaboration though effect on student outcome is not examined.

Figure 4.1: Female leadership in education vs female LFP rate, TALIS 2018
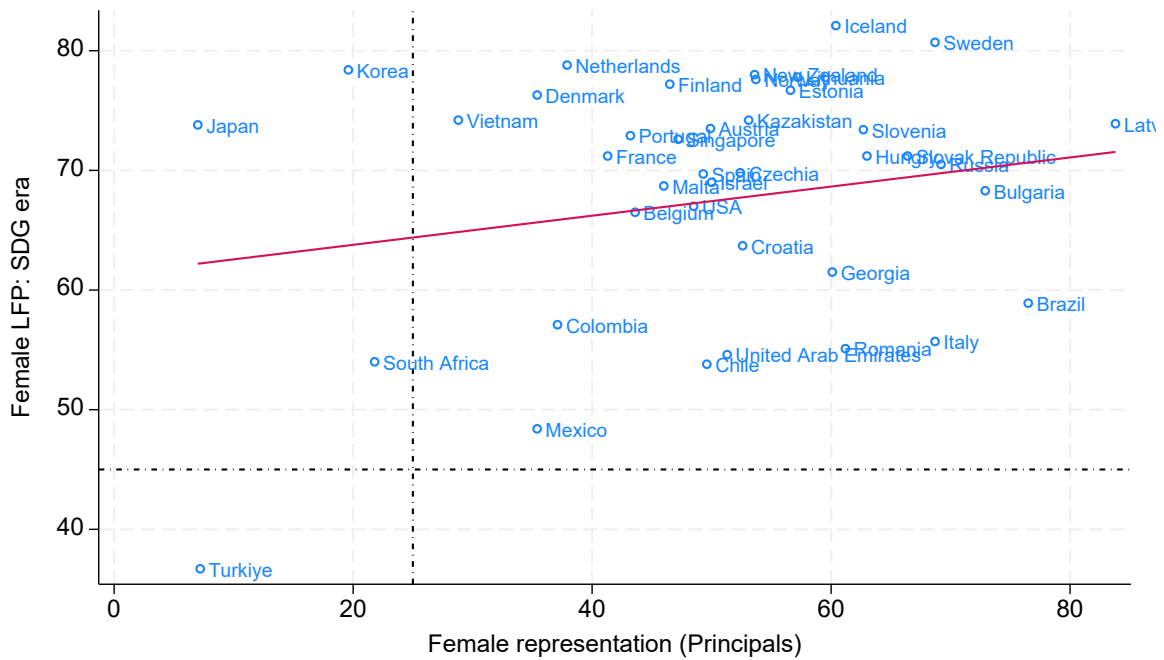
A global analysis using pooled data from multiple sources on countries at different stages of economic development confirm low presence (only 26%) of women in school leadership roles in low-income countries vis-à-vis 43.21% in middle-income and 53% in high-income countries (Anand et al., 2023). For the vast majority of (developing) countries outside TALIS 2018, therefore, under presentation is likely to be a more serious challenge. Administrative data from six African countries shows that the share of women among primary school leaders is very low, varying from 9%to 21% (Bergmann et al., 2022). None of our 4 study countries participated in these surveys. One exception is the 2020 Global School Leaders Survey which covers one of our study countries, Malaysia, alongside a number of Asian and African countries such as India, Indonesia and Kenya. A similar trend is observed once again: only 50% of school leaders identified themselves as women compared to more than 70% of teachers (Global School Leaders, 2021b).

Given the lack of comparable country-wise info on women's presence in educational leadership in global datasets such as World Development Indicators and the limited coverage of TALIS[14], we have compiled data on female education leaders from country specific sources in **Table 4.1** for our four study countries vis-a-vis a selection of other developing countries. **Table 4.1**: Female presence in educational and non-educational leadership roles

	Malaysia	Jordan	Pakistan	Nigeria
Panel A: Female presence in education sector				
Percentage of teachers in primary education who are female (%)	35.65	67.0	..	11
Percentage of teachers in secondary education who are female (%)	45.75	55.0	35	..

[14] Malaysia participated only in the 2013 round. For the full country list for 2018 along with analysis, see Veletić and Olsen (2021).

Percentage of teachers in primary education who are female (%)[a]	69.64	77.86	54.21	48.19
Percentage of teachers in lower secondary education who are female (%)[a]	..	57.03	71.36	50.62
Percentage of teachers in upper secondary education who are female (%)[a]	..	56.01	36.90	45.94
Percentage of teachers in secondary education who are female (%)[a]	67.17	56.62	60.48	47.87
Panel B: Female presence in non-education sector				
Proportion of seats held by women in national parliaments (%)[a]	14.41	15.38	20.23	3.38
Proportion of women in ministerial level positions (%)[a]	18.51	13.79	12	10.34
Share of female directors (% of total directors)[a]	..	..	14.35	33.55
Percent of firms with a female top manager[a]	33.2	3.1	..	
Female share of employment in senior and middle management (%)[a]	..	62	6.6	31.4
Employers, female (% of female employment) (modelled ILO estimate)[a]	1.73	0.97	0.10	1.06

Note: (a) The World Bank Development Indicators; (b) Global Gender Gap Report 2023. For Malaysia and Jordan, data corresponds to 2019. For Pakistan, data is for 2018. For Nigeria, panel A is for 2019 but panel B data is for 2010. All figures for Jordan are from Jordan National Teacher Survey 2018[15] and correspond to MoE schools. Although we refer to grades 6-10 as secondary, in Jordan this is part of basic education (secondary education is 11-12 years).

The earlier (i.e. TALIS) pattern of high share of women in non-leadership position holds. Turning to country specific estimates, when considering country specific sources of data, the above pattern is confirmed. Women enjoy a higher presence in leadership in countries that are economically more developed. In **Malaysia**, as per official data, between 2000 and 2013, female share in the total number of head teachers increased from 20.77% to 35.65% at the primary level and 36.98% to 45.75% at the secondary level[16]. This is also consistent with the estimated figure (49.1%) reported for Malaysia in TALIS 2013 against 70.1% of the total teaching force being women[17]. Equally, figures for primary and secondary schools for the year 2004 as reported in Kandasamy and Blaton (2004) were 19.8% and 34.9% respectively. Another upper-middle country in our study, **Jordan**, also shows high female presence. Official administrative data does not report female leaders in schools. However, the 2018 National Teacher Survey regarding principals, categorised by national trends or broken down by school type and gender of principals reveals that female principals constituted over 60% of the principal population in Jordanian schools[18]. This makes Jordanian education system one of the most progressive. Even if disaggregated by level of education, women dominate in school leadership in **Jordan** – 67% and 55% in primary and secondary grades respectively. Female share in school leadership (% of principals) is highest in secondary grades of private schools (84%). In UNRWA schools, 46% and 67% of principals are female respectively. In contrast to Malaysia and Jordan, women are lagging in terms of educational leadership in **Pakistan** and **Nigeria.**

In **Pakistan**, according to official data, between 2010 and 2020, except for tertiary education, the teaching force became more feminised. By 2020, the percentage of female teachers at primary, middle, and secondary school level stood at 57.3%, 72.8% and 61.2% respectively. In contrast, women accounted for 25.7% and 39.7% of the total teaching force in post-secondary colleges and universities respectively[19]. Moreover, the share of female teachers is

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[15] https://qrfsurveys.shinyapps.io/NTS_principals_EN/
[16] Source: Education for All 2015 National Review Report: Malaysia
[17] TALIS 2013 Results: An International Perspective on Teaching and Learning - © OECD 2014 https://nces.ed.gov/pubs2015/2015010.pdf
[18] https://www.qrf.org/en/what-we-do/research-and-publications/understanding-jordan's-principals;
[19] https://www.pbs.gov.pk/sites/default/files/social_statistics/publications/Social_Indicators_of_Pakistan_2021.pdf

even higher in private schools while it is as low as 22% in Deeni Madaris[20]. However, the official statistics do not separately report female share in leadership positions in schools and universities[21]. However, according to a large-scale random sample survey conducted in Punjab, one of the largest provinces of Pakistan, women accounted for only 35% of all head teachers in secondary schools (Salfi et al., 2014)[22]. In case of Pakistan, it is observed that small scale surveys yield larger but unreliable estimates[23]. For **Nigeria**, gender disaggregated education statistics is lacking (Yotebieng 2021). The national average of female teacher is only 48%, the lowest among our study countries (see **table 4.1**). However, it is a much smaller proportion compared in certain regions. For instance, in the state of Jigawa, only 12% of primary teachers are female. The teacher gender gap is even larger in rural areas; in the northwestern state of Zamfara, only 5% of teachers in rural areas are female (Rai et al., 2017). To our knowledge, data on female school leaders is not available in the Nigerian Educational Management Information System (NIMES). Such data is occasionally reported in individual research studies and reports and that too for specific regions or levels of education. For instance, in the 2013 primary school Early-grade Reading Assessment (EGRA), of the 173 teachers sampled, 22% were female. Female share among head teachers were 11% and 1% in government and Integrated Qur'anic and Tsangaya Education (IQTE) schools respectively[24]. Our own calculation for the state of Sokoto based on 783 school heads, as reported by the Sokoto State universal education board, suggest that only 5% are female[25].

The inter-country differences in educational leadership may be also reflective of poor overall presence of women in the society. For instance, female share of employment in senior and middle management in Jordan is as high as 62% compared to only 6.6% in Pakistan (see **Table 4.1, Panel B**). Moreover, in centralized education systems where schools, principals, and teachers have limited say in the student admission, and assessment policies, and matters with respect to teacher recruitment, pay, and placement are decided at the ministry level.

To probe further, **Table 4.2** presents the data over time spanning the past decades (2000-2023) for 10 countries. Women are underrepresented in the top ranks (e.g. Ministers and Secretaries) of the education sector in all four study countries. This is also true for selected comparison countries for which we have compiled additional data. This

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[20] According to Pakistan Education Statistics 2020-21, in terms of share in the total teaching staff, government institutions account for 43% compared to 57% in the private sector. The remaining 9% teachers serve in the Deeni Madaris (Islamic religious schools).

[21] For instance, according to Pakistan Education Statistics 2020-21, females account for 61 percent of all teachers in the education system up to the degree colleges in the year 2020-21. This is higher at the school level. For instance, there are in total 433,979 teachers at middle level of which 311,492 (72%) are female teachers. This pattern of feminized teaching force is also true for Punjab, Sindh, GB and Ajad Kashmir. For details, see http://www.neas.gov.pk/SiteImage/Publication/PES%202020-21.pdf

[22] The study included 351 head teachers and 702 teachers from 12 districts based on a stratified random sample.

[23] For example, Niqab et al (2015) sampled 178 secondary school teachers and 18 principals of which 55% were reportedly female.

[24] In total, 36 head teachers (which includes 3 assistant heads) in government schools and 38 head teachers (or proprietors) (which includes 3 assistant head teachers) at IQTE schools were also interviewed. https://earlygradereadingbarometer.org/pdf/Nigeria_2013_NEI-EGRA_Bauchi.pdf

[25]https://res.cloudinary.com/omniswift/image/upload/v1709485708/nti-corporate-website/reports/Training%20of%20Head%20Teachers%20on%20School%20Records%20Keeping%20in%20Sokoto%20State.pdf

contrasts with the data on female labour force participation as well as the fact that women make up a majority of the teacher labour force in most countries.[26] For instance, in Jordan, all of the 19 education ministers are male. In Malaysia, out of the 27 (full and deputy) education ministers, only 3 are women while 20% of the 10 education secretaries (Director General) in the last 23 years were female. In fact, only in 2022, a female became the Minister for Education (Fadhlina Sidek) for the first time. Coincidentally the deputy Minister, Lim Hui Ying, is also a female. Throughout Malaysia's sixty-year history, only 0.01% women have held the highest leadership positions in the Ministry (MOE, 2018). In Pakistan too, only 3 of 13 education ministers were women over the past 23 years, even though women comprise more than 71 percent of the lower-secondary teacher labour force. Paradoxically, women have a slightly higher presence in political leadership in Nigeria: out of 29 education ministers, 8 (i.e. 27%) were female[27].

Table 4.2: Female presence in political and governance leadership in education

	Ministers (% female)		Secretaries (% female)
Study countries			
Malaysia	11.11 [27]		20.00 [10]
Jordan	0.00 [19]		0.00 [2]
Pakistan	23.07 [13]		8.33 [12]
Nigeria	27.58 [29]	..	..
Selected comparison countries			
Afghanistan	7.14 [14]	..	..
Bangladesh	26.66 [15]		5.55 [36]
India	19.23 [26]		31.11 [45]
Indonesia	4.16 [24]		0.00 [3]
Philippines	33.33 [12]		46.15 [13]
Vietnam	9.09 [22]	..	..

Source: authors, based on publicly available internet data. Selected country-specific examples include Jordan (https://moe.gov.jo/node/), Nigeria (https://educeleb.com/list-ministers-of-education-in-nigeria/), Pakistan (https://fde.gov.pk/) and Malaysia (https://en.wikipedia.org/wiki/Ministry_of_Education_(Malaysia)). Full name list is available from the authors upon request. Notes: (1) The Table is based on all publicly identifiable education leaders for study countries; the total number of ministers/secretaries are in parenthesis; (2) For Bangladesh, data on the number of ministers include ministry of mass and primary education and madrassah education (Technical and Madrasah Education Division); (3) For India, and Nigeria, figures for secretaries is for the year 2023; (3) In Philippines, data on the Minister of Education includes two Ministers of Education and Culture; (4) For Indonesia, we could only locate 3 Secretaries from official documents published in English and available online.

In sum, our analysis of data on female leadership in educational governance shows a somewhat mixed picture. On average, middle-income countries like Malaysia and Jordan have more women in school leadership roles compared

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[26] G.E.M. Report, "Global Education Monitoring Rep".
[27] Data on education secretaries for Nigeria is only available for 2023, according to which 3 out of 4 are women.

to lower income Nigeria and Pakistan. However, women are systematically underrepresented in senior political leadership positions (i.e. Ministerial) in all countries.

5. Methodology and empirical findings

5.1. *Sample, methods and empirical approach*

The study builds on an available but unpublished and unexplored in-depth stakeholder data collection effort -- *Perception of Education Quality Survey (PEQS) 2017* -- conducted in four countries. PEQS contains unique data on leadership, education management and governance at state and sub-national levels (for details, see Asadullah 2018). The 4 case study countries -- Pakistan, Malaysia, Jordan, and Nigeria -- represent different geographic regions and level of educational development. Respondents were selected following a snowball sampling approach. For the four countries included in the PEQS 2017, data collection effort reflects the geographic distribution of Muslim-majority population in the world. It is because the data collection was funded by the OIC. The chosen countries are: Jordan from MENA, Nigeria from Sub-Saharan Africa, Pakistan from South Asia while Malaysia from Southeast Asia. We selected South Asia over Central Asia because most of the world's population with below primary level schooling is in South Asia. In addition, the following criteria were considered before selecting the countries: (i) Contrasting level of educational development: Enrolment and school completion rates are poor in Nigeria and Pakistan though that's not the case for our other two middle-income countries - Malaysia and Jordan. Nonetheless, in most cases, the level of learning is poor and progress lacking; (iii) All countries are under a centralised system of monitoring, assessment, and evaluation. Appendix A summarizes the key selection criteria in matrix form and provides additional information on respondent selection and sample composition. **Figure 4.2** shows the ranking of our study countries in terms of the Gender Policy Index and a selected education related sub-indicators used in the index. Interestingly all our study countries share similar rankings when compared to the global distribution.

Figure 4.2: Study country ranking in the global distribution of Gender Policy Index
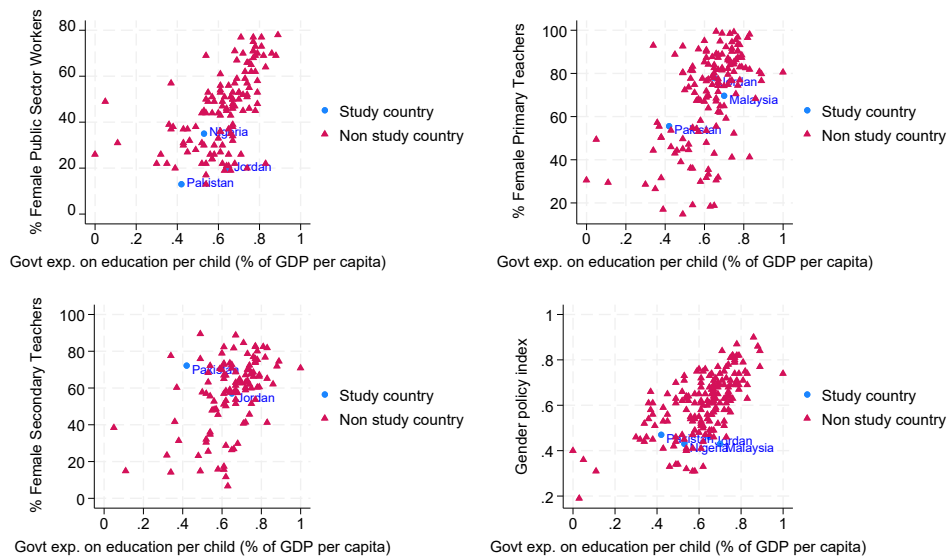
Source: Authors based on data extracted from Centre for Global Development report.

To complement the quantitative analysis, a number of stakeholders' interviews have been carried out in each country. Stakeholder's beliefs about the current problems in the education sector in their country matter because it influences their attitudes towards and support for reform initiatives. But these beliefs may not be necessarily accurate. Moreover, views of policy stakeholders in centralised system may not be aligned with those directly involved with day-to-day management of the schools. For related reasons, our study does not directly examine requirements of good leadership and their drivers (including socio-cultural preconditions), nor it is about its impact on education quality and learning outcomes. We indirectly shed light on the importance of leadership or related attributes by studying perceived features of leadership within school systems (i.e. school *principal* versus *teacher*) across a wide group of stakeholders and compare that with features of an effective school in general[28]. Local level system leaders (district officer, inspector, or supervisor) take part only as a sub-group of stakeholders alongside non-state actor leaders. The study design leaves out central level system leaders (officials of the Ministry of Education) and political actors.

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[28] Few studies have directly examined teachers' perspectives on principals' everyday instructional leadership characteristics and the impacts of those characteristics on teachers. In study by Blasé and Blasé (2000), over 800 American teachers responded to an open-ended questionnaire by identifying and describing characteristics of principals that enhanced their classroom instruction and what impacts those characteristics had on them. The data revealed two themes (and 11 strategies) of effective instructional leadership –: talking with teachers to promote reflection and promoting professional growth.

The final sample comprises 201 stakeholders of both genders. The majority are school teachers and principals (see **Figure 4.3**). About 15% comprise non-school stakeholders (e.g. school inspectors, district education officers, officials of local NGOs, think tanks, and so on). Both high-performing and low-performing schools were considered; the sampling was purposive. In most cases, one-to-one interview was carried out for 40 minutes. In other instances, the survey questionnaire was distributed via email.

Figure 4.3: Study country ranking in the global distribution of Gender Policy Index.
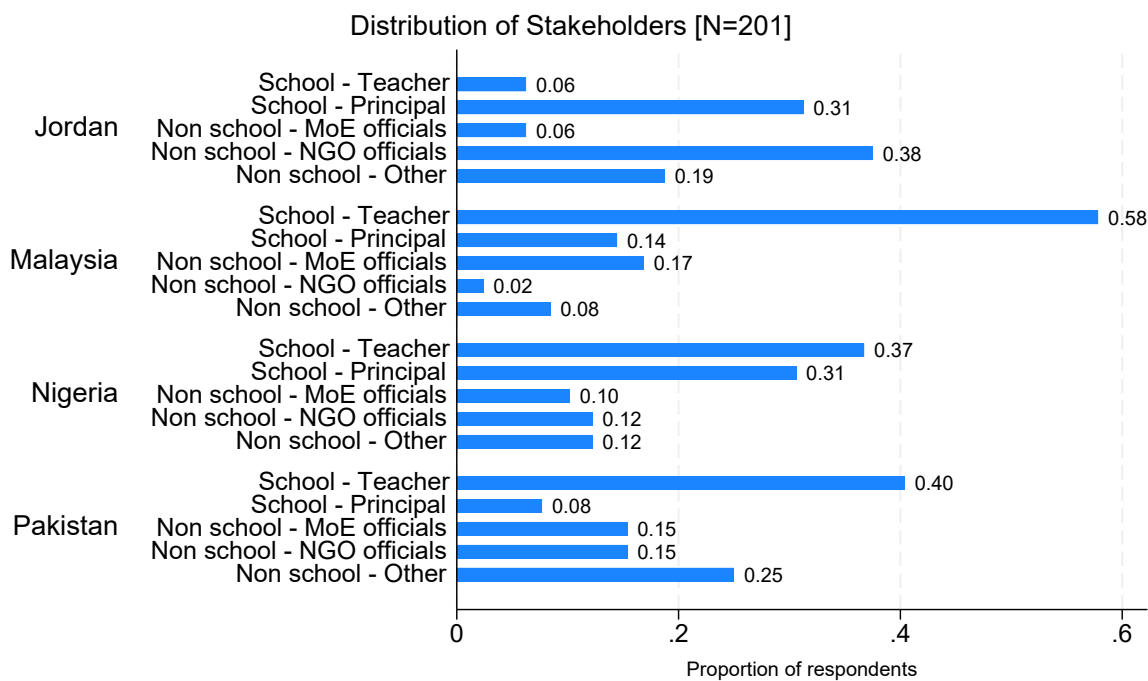
Source: Authors.

Methodologically, we adopt a mixed methods approach. In addition to response to close-ended survey questions, we conduct a short content analysis of two open ended questions (text data) to identify key themes. However, not all respondents responded to the qualitative question so that the data could not be used to develop a qualitative index of school leadership. But it still offers insights complementing our quantitative data on attributes of effective school leader and teacher. Lastly, we additionally develop an integrated multivariate statistical model of (i) school leadership and (ii) perceived overall quality of the school, pooling data across 4 sample countries[29]. These models

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[29] We follow existing empirical studies in the literature such as Bellibas and Liu (2016) who examine relationship between stakeholder's (e.g. principals') perceived practices leadership and perceptions of quality (e.g. school climate) controlling for principal and school characteristics.

control for country and stakeholder effects to separately test for gender differentiated effect. This is important given the sizable literature on whether women make better leaders in school education context.

5.2. *Leadership and education quality*

In this section, we examine how education quality is defined by respondents in our sample and the primacy of leadership as a factor in their understanding of correlates of student learning or education quality in general.

We begin with qualitative evidence on education quality. Here, we present thematic analysis of subjective (i.e. open ended) responses to a question on perception of quality of education. In total, based on analysis of various codes, three themes emerged: (i) student learning; (ii) governance and leadership; and (iii) resources. Quotes with reference to student learning or test, examination, and assessment (of learning outcomes) were categorised against codes such as "learning" related and those with reference to education system, organize, govern, leader and teach were categorised as that related to "governance and leadership". Lastly, those with reference to resource, material and facility were categorised as that related to "resources and facilities". Given this classification rule, themes are not mutually exclusive. Survey responses are analysed by stakeholder type and gender. In doing so, this exercise serves as an indirect way to elicit perspectives on the importance of leadership and governance in the broader context of education quality[30]. Below is a selection of sample quotes:

"*Quality education means trained teachers, enough facilities in the classroom including ICT technology & teachers [who] are able to deliver their lesson effectively & students are able to learn & perform in the exam*" – **School Inspector (male), Malaysia**

"Quality education for me is when school education is student-centered, with the emphasis towards mental growth and the well-being of a student (besides academic growth), with educators who present good role model to the students and always look for students' improvement in any way possible" –S**econdary school teacher (female), Malaysia**

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[30] This approach is somewhat similar Blasé and Blasé (2000) who examine teachers' perspectives on principals' instructional leadership characteristics and the impacts of those characteristics on teachers based on teachers' response to an open-ended question.

"Most people would define quality [education] by using assessment results, in my opinion, quality encompass a broader definition to cover other aspects of a student (e.g. confidence, leadership skills, communication skills etc.)" – **School principal (male), Malaysia**

"One of the characteristics of quality education (according to "Education Blueprint") is that students should be bi-lingual and achieve high academic excellence. Education should produce leaders …" – **School principal (male), Malaysia**

"High-performing leadership ….. that produces students who strive for excellence" **– District Education Officer (male), Malaysia**

"[Quality education] means teachers act more as facilitators and engage learners in a learning process where learners know how to learn and consciously choose how they want to learn something rather than teachers spoon feeding them" – **Secondary school teacher (female), Malaysia**

"[Quality education is] where children are provided with equal opportunities to learn and acquire best" – **Secondary school teacher (female), Pakistan**

"Quality education is the act of teaching and learning which brings a positive change among children" – **Primary school teacher (female), Nigeria**

"Quality education is provided by motivated and qualified teachers in safe and healthy atmosphere to learners in order to build the capabilities they need to become lifelong learners, inspired, curious, economically productive with social responsibility, develop sustainable income, contribute the advancement of their country." **Deputy Director (female), Education NGO, Jordan**

"In my understanding quality education means an inquiry–based education with the focus on the student and not the teacher. Empowering students and drilling in them the skills they need in life like critical thinking, creativity, questioning etc." **Secondary School Teacher (female), Jordan**

Figure 5.2a: Quality education: Stakeholder-wise distribution of themes

Perception: Quality of Education [N=174]

		Proportion of Respondents
Principal:	learning	0.20
	governance & leadership	0.30
	resources & facilities	0.07
Teachers:	learning	0.30
	governance & leadership	0.18
	resources & facilities	0.08
Others:	learning	0.32
	governance & leadership	0.31
	resources & facilities	0.06
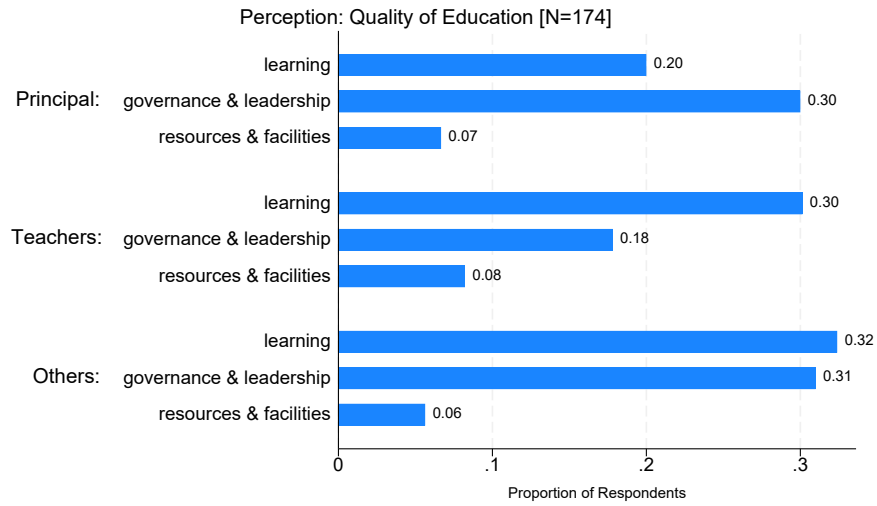
Figure 5.2b: Quality education: Gender-wise distribution of themes

Perception: Quality of Education [N=174]

		Proportion of Respondents
Male	learning	0.33
	governance & leadership	0.31
	resources & facilities	0.04
Female	learning	0.26
	governance & leadership	0.21
	resources & facilities	0.09
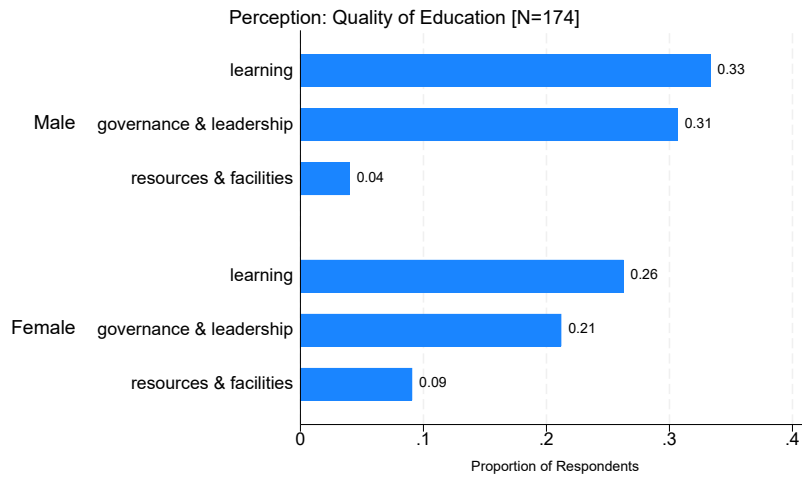
Figure 5.2c: Quality education: Country-wise distribution of themes

Perception: Quality of Education [N=174]

Jordan	learning	0.21
	governance & leadership	0.21
	resources & facilities	0.00
Malaysia	learning	0.22
	governance & leadership	0.25
	resources & facilities	0.08
Nigeria	learning	0.36
	governance & leadership	0.22
	resources & facilities	0.07
Pakistan	learning	0.35
	governance & leadership	0.29
	resources & facilities	0.08

Proportion of Respondents
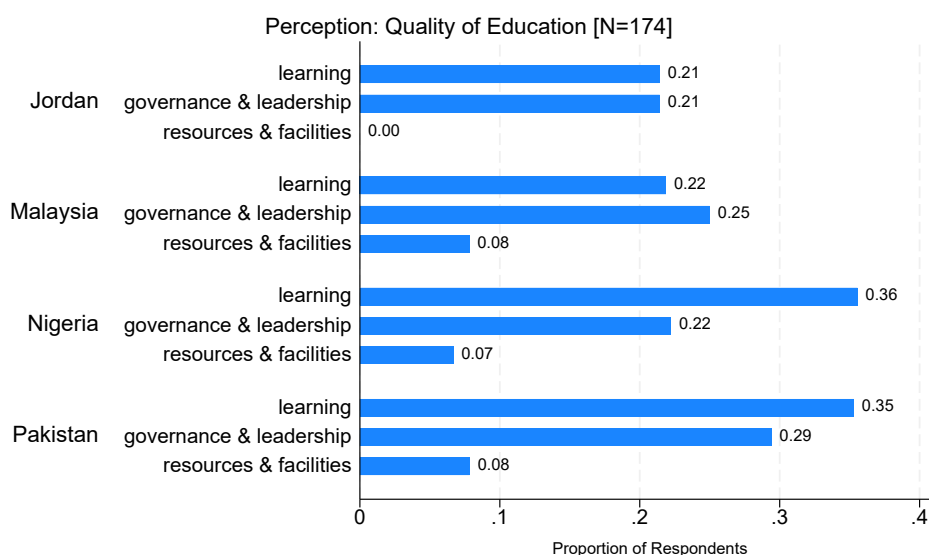
Notes: Given that multiple themes are allowed per respondents, percentages do not add up to 100.

A couple of patterns emerge from the overall analysis of the content of open-ended responses. First, all three stakeholder groups made few references to resources (physical/financial) as a correlate of education quality. However, learning-related concerns dominate school teachers' assessment of education quality while principals are more likely to refer to "governance and leadership" related concerns when elaborating on their understanding of the concept of education quality. Among non-school stakeholders, learning and leadership related factors receive equal emphasis (see **Figure 5.2.a)**. Second, there are important gender differences. Governance and leadership related codes account for 31% of male responses as opposed to 21% of female responses implying a 10percentage point difference. Equally, learning related codes account for 33% of male responses as opposed to 26% of female responses (see **Figure 5.2.b).** Third, some cross-country differences in responses are noteworthy (although our sample is not balanced across study countries). Respondents across all country groups made few references to resources (physical/financial) as a correlate of education quality. In contrast, learning related codes dominated responses in Nigeria and Pakistan accounting for 36% and 35% responses respectively. In Jordan and Malaysia, open-ended responses on education quality were balanced with reference to student learning and governance/leadership related codes (see **Figure 5.2.c)**.

Next, we present quantitative results to describe how stakeholders perceive the link between leadership and learning outcomes. For this purpose, we analyse response to two questions. The first question specifically asks them to identify three most important factors for improving student learning at the secondary level. The second question asks them to identify *three* main barriers to quality secondary education.

When asked specifically about most important factors for improving student learning at the secondary level, all stakeholders, regardless of gender, identified student-centred learning and better training for teachers as the two

most important factors. However, there are some differences. Among sample principals interviewed, 72% and 64% identified "better teacher training" and "student-centered learning" as the two most important factors for improving student learning. In contrast, 64% and 70% teachers identified "better teacher training" and "student-centered learning" as the two most important factors. Another notable finding is that less than 10% respondents in each category identified "lack of funding or (physical) facilities" per se as important for improving student learning (see **Figures 5.2.d**). Responses are balanced across gender groups (**Figure 5.2.e**).

Figure 5.2.d: Factors to improve student learning: Stakeholder-wise distribution of response codes.
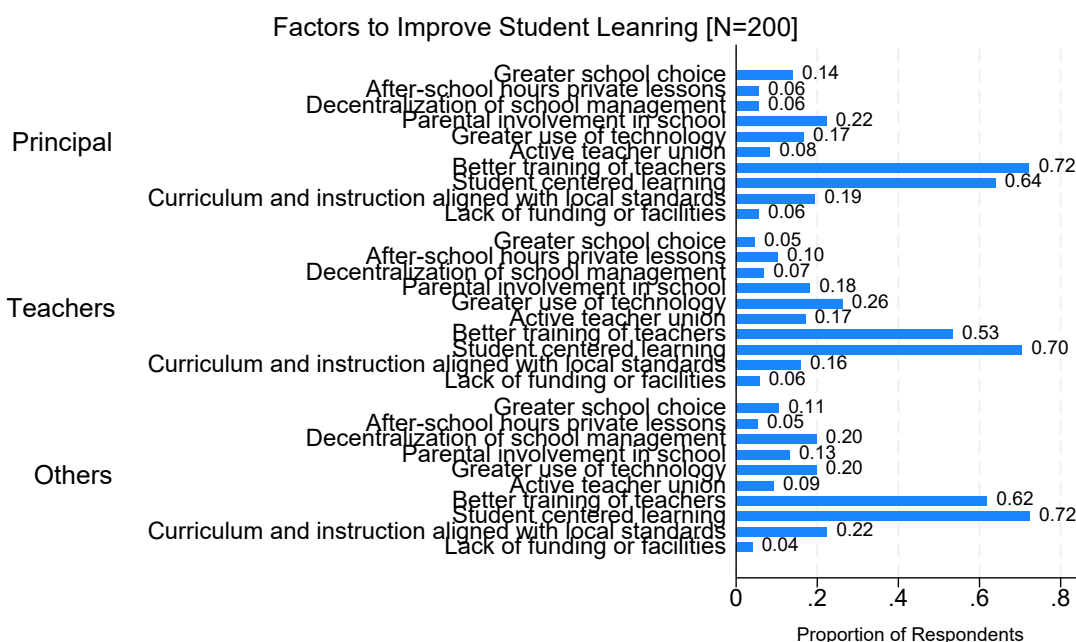

Factors to Improve Student Leanring [N=200]

Figure 5.2.e: Factors to improve student learning: Stakeholder-wise distribution of response codes.

Factors to Improve Student Leanring [N=200]
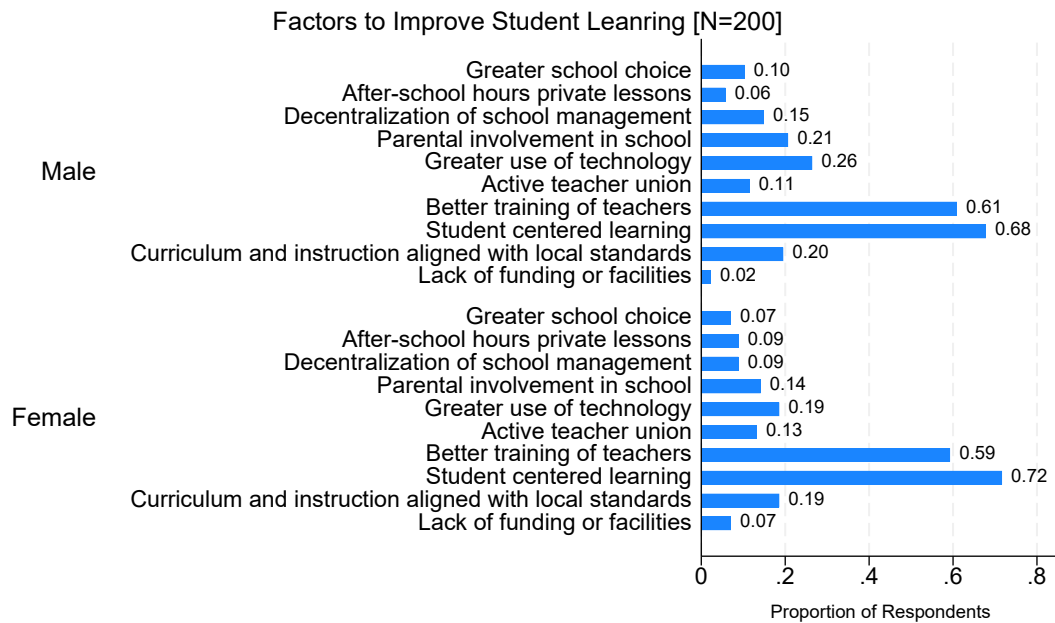
Notes: Student-centered learning is the aggregate of the following responses: (i) homework management techniques; (ii) improve school culture-learning organization; (iii) student-centered learning; and (iv) development of student's communication skills.

Turning to the question on main barriers to quality secondary education, all three stakeholder groups acknowledged the importance of leadership: "Lack of leadership" account for 42%, 48% and 54% responses among principal, teacher, and non-school stakeholders. Second, there is a contrasting finding: 44% of the sample principals (as opposed to only 22% of teachers) identified "lack of qualified teachers" as a barrier though both principals and teachers agreed on the importance of "lack of motivated teachers" (39% and 45% respectively). Third, almost an equal proportion also identified "lack of funding or facilities" as one of the three important barriers. This contrasts with the evidence presented earlier on the perception of quality education and factors perceived to improve student learning outcomes.

Lastly, there are important gender differences: 49% of male respondents identified "lack of leadership" as one of the main barriers; the figure is lower (42%) for female respondents. In contrast, learning related codes account for 33% of male responses as opposed to 26% of female responses (see **Figure 5.2.g).**

Figure 5.2.f: Main barriers to quality education: Stakeholder-wise distribution of response codes.

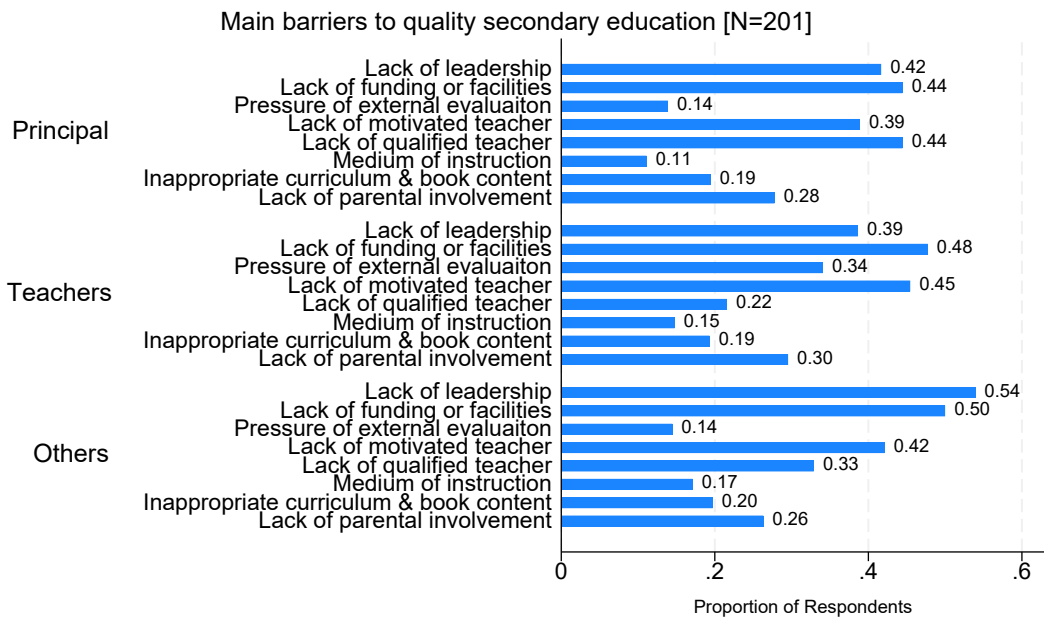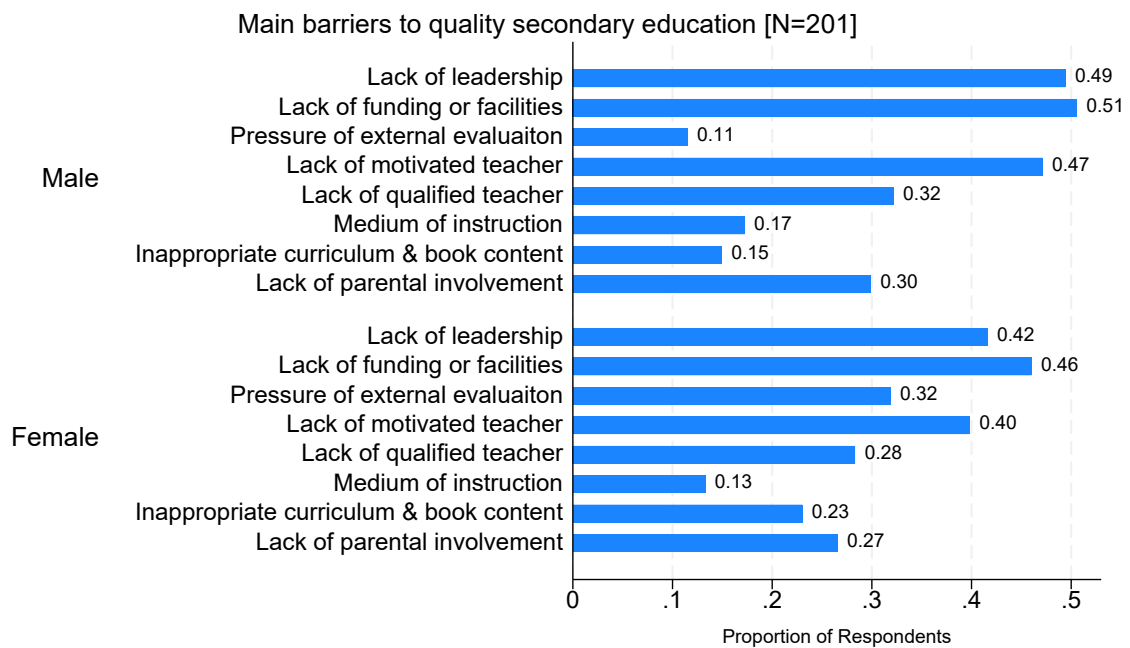## Main barriers to quality secondary education [N=201]

Principal
- Lack of leadership: 0.42
- Lack of funding or facilities: 0.44
- Pressure of external evaluaiton: 0.14
- Lack of motivated teacher: 0.39
- Lack of qualified teacher: 0.44
- Medium of instruction: 0.11
- Inappropriate curriculum & book content: 0.19
- Lack of parental involvement: 0.28

Teachers
- Lack of leadership: 0.39
- Lack of funding or facilities: 0.48
- Pressure of external evaluaiton: 0.34
- Lack of motivated teacher: 0.45
- Lack of qualified teacher: 0.22
- Medium of instruction: 0.15
- Inappropriate curriculum & book content: 0.19
- Lack of parental involvement: 0.30

Others
- Lack of leadership: 0.54
- Lack of funding or facilities: 0.50
- Pressure of external evaluaiton: 0.14
- Lack of motivated teacher: 0.42
- Lack of qualified teacher: 0.33
- Medium of instruction: 0.17
- Inappropriate curriculum & book content: 0.20
- Lack of parental involvement: 0.26

Proportion of Respondents

Figure 5.2.g: Main barriers to quality education: Gender-wise distribution of response codes.

Main barriers to quality secondary education [N=201]

Male
- Lack of leadership: 0.49
- Lack of funding or facilities: 0.51
- Pressure of external evaluaiton: 0.11
- Lack of motivated teacher: 0.47
- Lack of qualified teacher: 0.32
- Medium of instruction: 0.17
- Inappropriate curriculum & book content: 0.15
- Lack of parental involvement: 0.30

Female
- Lack of leadership: 0.42
- Lack of funding or facilities: 0.46
- Pressure of external evaluaiton: 0.32
- Lack of motivated teacher: 0.40
- Lack of qualified teacher: 0.28
- Medium of instruction: 0.13
- Inappropriate curriculum & book content: 0.23
- Lack of parental involvement: 0.27

Proportion of Respondents

5.3. Perception of effectiveness of schools, principals, and teachers

Given stakeholder perceptions on the link between education quality and leadership as summarised in section 5.2, this section we ask how stakeholder perceive effectiveness of schools, principals, and teachers. To this end, we analyse response to questions interrogating the meaning of effective schools and leaders where respondents are specifically asked to identify three most important features of (i) an effective school; (ii) an effective principal; and (iii) an effective teacher. Each question was accompanied by a closed set of 12 response codes which covered leadership and other

traits[31]. However, for the sake of parsimony, some of the (non-leadership) response categories have been combined. Once again, we report the main findings by stakeholder type and gender. A number of patterns emerge from our analysis of answers close-ended response content.

In their reflections on school effectiveness, all three group of stakeholders acknowledged the importance of "being learning focused" (48%, 69% and 64% responses among principal, teacher, and non-school stakeholders respectively). Second, non-school stakeholders (i.e. 50% of them) identified "school leadership" as the second most important feature of an effective school followed by principals and teachers (33% and 20% respectively). In contrast, teachers identified "supportive learning environment" as the second most important features (51%) compared to 41% and 31% of non-school stakeholders and principals respectively (**Fig 5.3a**). We also note important gender differences. Compared to male respondents, females not only recognise "learning focus" more (59% versus 71% respectively), 55% of females name "supportive learning environment" as the most important feature of an effective school compared to only 33% male respondents.

Figure 5.3.a: Effective school: Stakeholder-wise distribution of response codes.

Most important features of an effective school [N=201]

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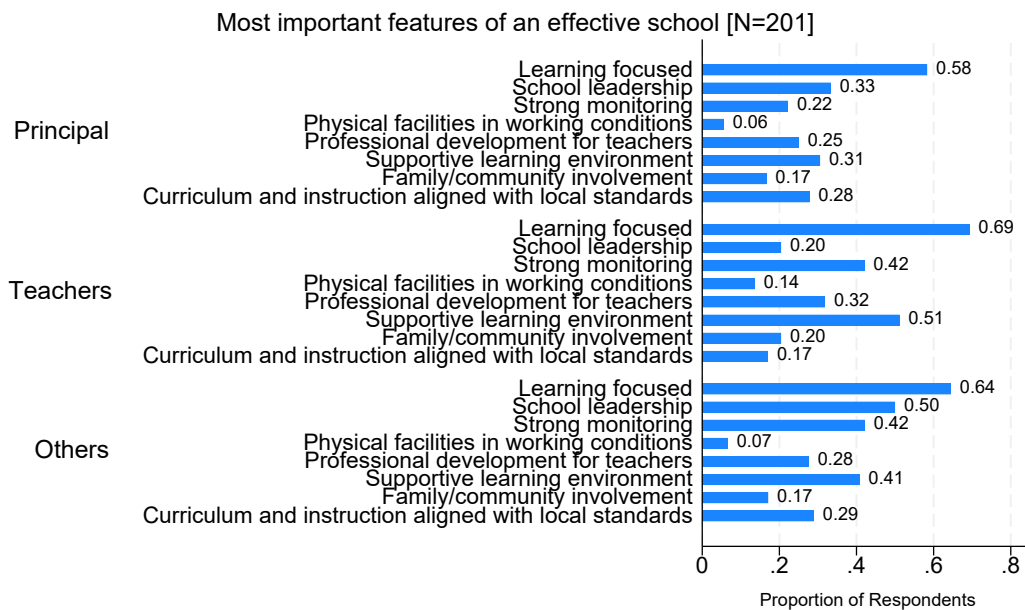
[31] Along with leadership practices, school organisational conditions, teacher motivation, and teacher learning are recognised as measures of school-wide capacity for continuous performance improvement (Thoonen et al. 2012).

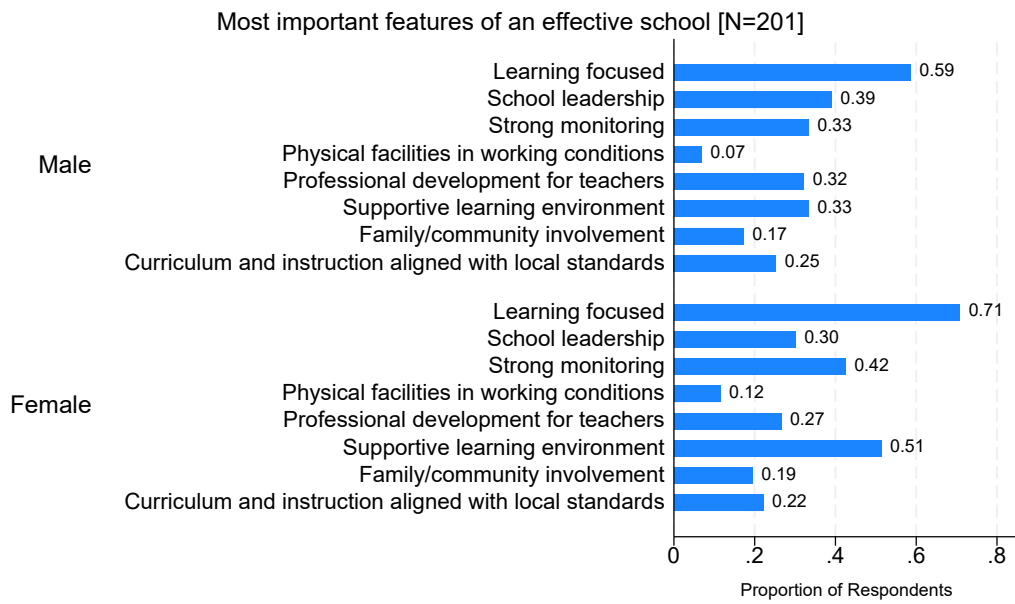**Figure 5.3.b**: Effective school: Gender-wise distribution of response codes.

Most important features of an effective school [N=201]

Figure 5.3.c: Effective principal: Stakeholder-wise distribution of response codes.

Most important features of an effective principal [N=201]
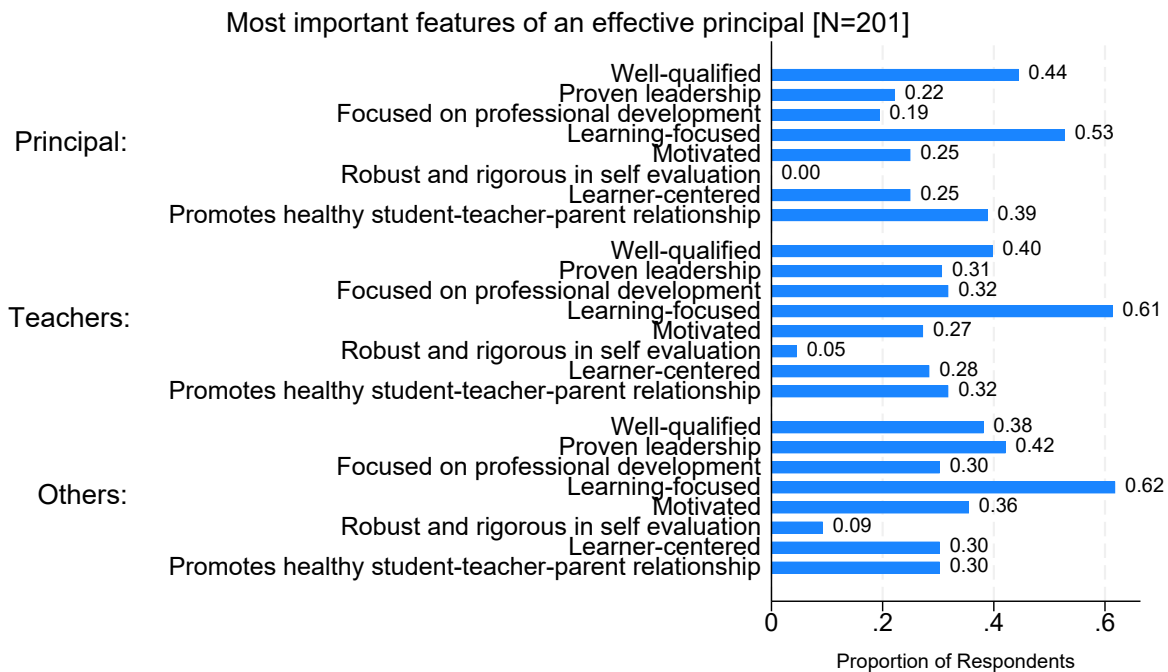
Figure 5.3.d: Effective principal: Gender-wise distribution of response codes.

Most important features of an effective principal [N=201]
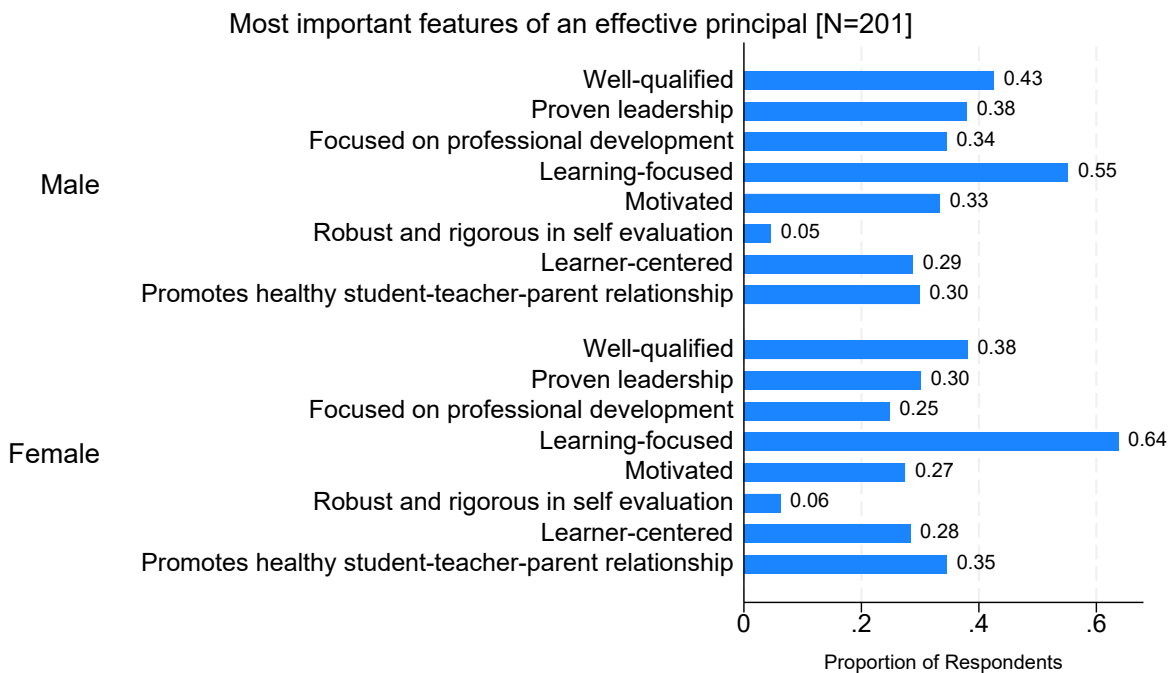
Notes: (1) "<u>Learning-focused</u>" includes being (a) focused on improving teaching & learning practices and (b) opportunities for leaning within and outside of the classroom. (2) Being "<u>learner focused</u>" includes (a) ensuring progress and personal development of students; (b) assessing and tracking student progress; and (c) extending support towards weaker student and giving them extra attention.

5.4. *Discussion*

Given the gender gap in school and political leadership roles in all 4 study countries and the international evidence on the positive link between female leadership and student outcomes, increasing female representation in school leadership is an important means to improve a wide range of student-related outcomes. While we do not find any evidence of systemic gender gap in perceived features of leadership within school systems, our findings have implications for school leadership policy and gender. Regardless of whether its perception of important factors related to improving student learning (Figs 5.2.d & 5.2.e) or that of attributes of an effective school teacher (Figs 5.3.e & 5.3.f), we find clear evidence of support for student-centered learning (or learner-centered education) where methods of teaching shift the focus of instruction from the teacher to the student. Reassuringly although such pattern of support is stronger among teachers than principals, and the overall level of support is high across all stakeholder groups (Fig 5.3e).

Student-centered learning necessitates a departure from the traditional teacher-centered approach to education by placing students at the forefront of the learning process. These findings are indicative of broad-base support for instructional and transformative leadership styles both of which are generally more supportive of student-centered approaches. These leadership styles prioritise pedagogical innovation, teachers' professional development, and the creation of learning environments that prioritises student engagement and agency. Even in the context of effective

teachers, we find strong support for teachers who are "learning-focused" and "learner-centered". In the context of classroom observation and feedback, being learner-centered is about being focused on students while being learning-focused refers to both teachers as learners. Together, learner-centered and learning-focused attributes define a culture of learning throughout the school (Tepper and Flynn, 2020).

Turning to responses on perceptions of an effective principal, all three stakeholder groups overwhelmingly identified "learning-focused" as the most important attribute (53%, 61% and 62% responses among principals, teachers, and non-school stakeholders respectively). Reassuringly a related attribute, "learner-centered", did not receive much recognition as it's more applicable to teacher effectiveness. The second most selected attribute was "being well-qualified" (44%, 40% and 38% responses among principals, teachers, and non-school stakeholders respectively). Interestingly, the recognition of "proven leadership" varied across stakeholder groups: 22%, 31% and 42% responses among principals, teachers, and non-school stakeholders respectively (**Fig 5.3c**). Apparently non-school stakeholders (i.e. 50% of them) identified "school leadership" as the second most important feature of an effective school followed by principals and teachers (33% and 20% respectively). We also note important gender differences. Female respondents recognise "learning-focus" more as compared to the males (64% vs 55% respectively). On the other hand, a higher percentage of male respondents (38%) identify "proven leadership" as a most important feature of an effective school compared to only 33% females (**Fig 5.3d**).

Turning to reflections on an effective school teacher, all three stakeholder groups overwhelmingly identified "learning-focused" as the most important attribute (44%, 56% and 55% responses among principals, teachers, and non-school stakeholders respectively). Relatedly 44%, 50% and 53% principals, teachers and non-school stakeholders respectively acknowledged "learner-centered" as one of the most important features of an effective school teacher. The second most selected attribute was "being well-qualified" (50%, 41% and 41% responses among principals, teachers, and non-school stakeholders respectively). (**Fig 5.3e**). We also note some gender differences. While both female and male respondents recognise "learning focus" (54% and 53% respectively), 53% female respondents (compared to 46% male) identify "learner-centered" as one of the most important features of an effective school teacher (**Fig 5.3f**).

Figure 5.3.e: Effective teacher: Stakeholder-wise distribution of response codes.
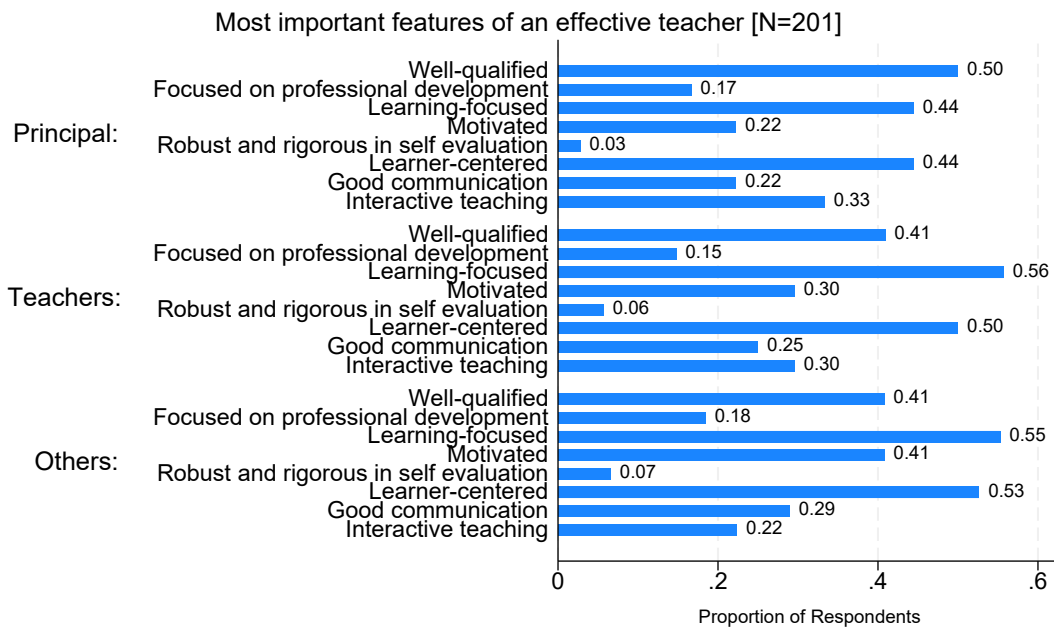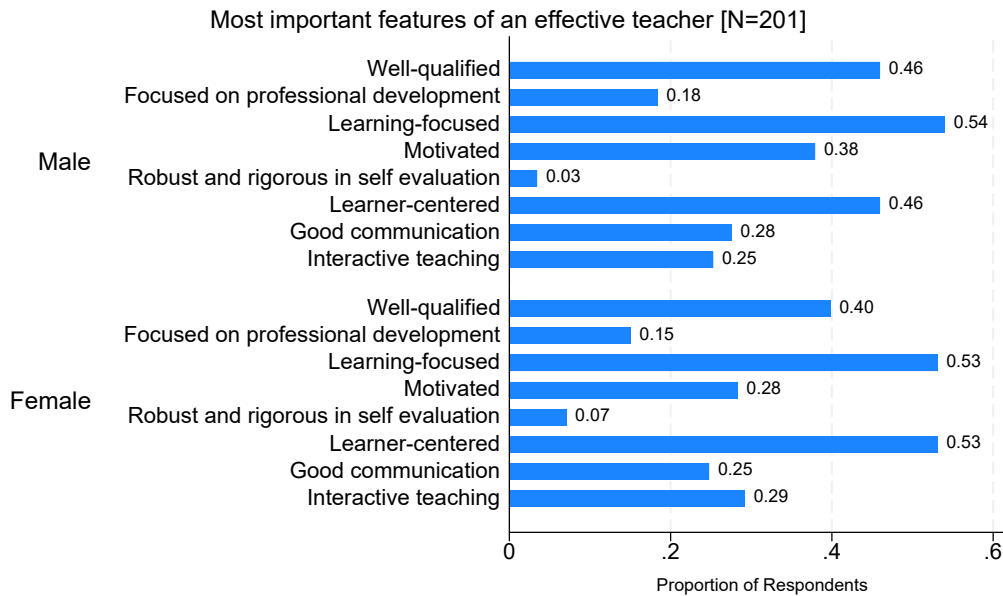
Most important features of an effective teacher [N=201]

Principal:	Well-qualified	0.50
	Focused on professional development	0.17
	Learning-focused	0.44
	Motivated	0.22
	Robust and rigorous in self evaluation	0.03
	Learner-centered	0.44
	Good communication	0.22
	Interactive teaching	0.33
Teachers:	Well-qualified	0.41
	Focused on professional development	0.15
	Learning-focused	0.56
	Motivated	0.30
	Robust and rigorous in self evaluation	0.06
	Learner-centered	0.50
	Good communication	0.25
	Interactive teaching	0.30
Others:	Well-qualified	0.41
	Focused on professional development	0.18
	Learning-focused	0.55
	Motivated	0.41
	Robust and rigorous in self evaluation	0.07
	Learner-centered	0.53
	Good communication	0.29
	Interactive teaching	0.22

Proportion of Respondents

Figure 5.3.f: Effective teacher: Gender-wise distribution of response codes.

Most important features of an effective teacher [N=201]

Male	Well-qualified	0.46
	Focused on professional development	0.18
	Learning-focused	0.54
	Motivated	0.38
	Robust and rigorous in self evaluation	0.03
	Learner-centered	0.46
	Good communication	0.28
	Interactive teaching	0.25
Female	Well-qualified	0.40
	Focused on professional development	0.15
	Learning-focused	0.53
	Motivated	0.28
	Robust and rigorous in self evaluation	0.07
	Learner-centered	0.53
	Good communication	0.25
	Interactive teaching	0.29

Proportion of Respondents

Lastly, turning to the role of gender, for our study countries, some scholars have examined gender-based differences of teachers' perception about effective leadership qualities. For Pakistan, Aziz et al. (2017) finds male head teacher to be more effective in performing leadership qualities than female head teachers. Given the limited sample size, we could not distinguish between the influence of gender and stakeholder type. But purely for illustration purposes, we use a set of binary indicators of attributes of an effective school, principal and teacher and estimate ordinary least square regression based on our pooled cross-section sample. This sheds some light on the relative significance of the

correlation across stakeholder type, gender, and country groups. In all cases, the coefficient on respondent gender is insignificant while stakeholder type (being a teacher or principal) is mostly insignificant. However, regression results confirm a strong influence of culture or context – country dummies are significant in most cases (Appendix Table 2A). We also repeated the regression exercise using an alternative set of (binary) outcome variables that correspond to (i) main barriers to quality education and (ii) main factors to improve student learning. However, the conclusions remain unchanged (Appendix Table 2B).

6.Policy implications and recommendations

Our analysis of available secondary data on leadership (e.g. education minister, bureaucratic heads of ministries and school principals) confirms that women are missing from leadership roles at all levels within education system. This is consistent with the available evidence on the disproportionately small share of school leaders in the Global South that are female. Scholars have therefore called for examination of various multitude of biases, discriminatory practices, and systemic challenges that leaders from underrepresented groups may face in education system (Gipson et al., 2017).

One policy recommendation is to introduce gender-targeted quotas to increase female presence in educational leadership. Our own review of policies and legislations have scrutinised provisions to promote female leadership in politics and government in all four study countries. However, these did not trickle down to education sectors by encouraging greater representation of women in decision-making roles in schools and in leadership roles at the Ministry of Education. Only for Pakistan and Jordan, we found evidence school leadership quotas for women. But there is no systematic provision for female educational leadership in Nigeria and Malaysia. Moreover, gender-specific criteria for promotion to leadership roles within schools is lacking in all four cases.

Given the above, three specific recommendations are: (i) target hiring of female school leaders in areas where they are most underrepresented (e.g. higher secondary grades and STEM disciplines); (ii) give girls early access to strong female role models may be also considered; and (iii) address hidden barriers in all stages - recruitment, tenure, training and promotion.

Similar to that of a lack of policy provisions on female representation in educational leadership, our analysis also highlights the paucity of systematic data on female leadership across various segments of the education system. Therefore, alongside creating new provisions to promote female leadership, government statistical agencies should

also address major gaps in the collection and reporting of statistics on women's educational leadership roles - educational leadership data should be gender disaggregated and that too at all levels.

Increasing female share can have a positive influence on student outcomes. Although we have not formally demonstrated this in our empirical analysis, our qualitative and quantitative data yielded a range of policy relevant insights. Qualitative data confirmed that all stakeholders recognised student-centred instead of the traditional teacher-centered understanding of the learning process where students are put at the centre of the learning process. However, ensuring student-centered learning calls for instructional leadership.

Our quantitative evidence confirms not only variation in the practice leadership behaviors among principals are associated with multiple leadership styles, but they also differ vis-a-vis school context and principal's background. This calls for more complex and detailed models to assess school leader effectiveness in cross-cultural settings, particularly in the global south. In this study, we have not directly studied leadership style and its impact on educational quality and/or learning outcomes. That said, the recommendation for school-based interventions in the form of female leadership quotas can still benefit girl students even if they do not increase learning outcomes (Carvalho and Cameron, 2022; Anand et al, 2023). Moreover, having women in managerial roles has other positive benefits on female employees (Biasi and Sarsons 2022)[32].

7. Conclusion

Effective school leadership, along with political leadership within the education sector, is widely regarded as essential for improving teaching practices and learning outcomes. However, there is a lack of research comparing the perceptions of school leaders, external leaders, and teachers, which limits our understanding of the contrasts between these groups. Divergence among key stakeholders regarding the concept of education quality and its relationship with input factors can hinder reform efforts. While many studies have focused on the role of school leadership, particularly principals, the perspectives of other key stakeholders in the education system and their understanding of leadership challenges remain underexplored. Additionally, the issue of gender inequality in educational leadership and perceptions of leadership is often overlooked.

In this context, our study contributes to the existing body of knowledge on school leadership by critically analyzing secondary data on educational leadership and the legislative provisions aimed at promoting women in leadership roles, both within and outside the education sector. This analysis is supplemented by a descriptive examination of

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[32] In the United States, female principals and superintendents also reduce the gender wage gap that arises when flexibility is introduced into the wage-setting process among public school teachers (Biasi and Sarsons 2022).

qualitative and quantitative data on the perceptions of three distinct stakeholder groups—principals, teachers, and policymakers—across multiple dimensions of education quality. These dimensions include the characteristics of an effective school, effective principals, and effective teachers. We also examined perceived barriers to quality education and factors deemed crucial for improving student learning, assessing whether these perceptions vary by stakeholder type, gender, and cultural context.

Our review of legislation and policies in the four countries studied confirms the presence of quotas for women in leadership positions in non-educational sectors. However, these quotas do not extend to educational leadership, particularly at the school or ministry level, with the exception of some provisions in Pakistan and Jordan. We found no evidence of gender-specific criteria for promotion to leadership roles within schools in any of the four countries.

The analysis of data on female leadership in educational governance presents a mixed picture. Economically advanced countries like Malaysia and Jordan have more women in school leadership roles compared to lower-income countries like Nigeria and Pakistan. However, women remain underrepresented in senior political leadership positions, such as ministerial roles, across all four countries. Moreover, women's underrepresentation in leadership positions outside the education sector is also a concern in these countries.

To further explore the role of female leadership, we analyzed qualitative and quantitative data on stakeholder perceptions of school leadership and education quality. Teachers primarily focused on learning-related concerns in their assessments of education quality, while principals emphasized governance and leadership. Among non-school stakeholders, both learning and leadership factors were emphasized equally. Disaggregating responses by gender, we found that governance and leadership themes were more prominent in male responses. While our analysis does not reveal significant gender differences in the understanding of effective leadership, we found suggestive evidence that female stakeholders are more likely to identify "learning-focused" and "learner-centered" teachers as effective.

Our policy recommendations include the introduction of gender-targeted quotas to increase the representation of women in educational leadership, as well as the establishment of gender-specific criteria for promotion to leadership roles within schools and education ministries. Finally, we highlight the need for systematic data collection on female leadership across various segments of the education system and recommend that government statistical agencies collect and report gender-disaggregated statistics on educational leadership roles.

RECOMMENDATIONS ON POTENTIAL RESEARCH AREAS TO COMMISSION RESEARCH

Our review has identified some evidence gaps. First, we could not locate studies that causally evaluate policy/legislation induced change in gender equality in educational leadership positions, let alone across specific aspects such as tenure, recruitment, retention, and promotion[33]. Second, while it is acknowledged that leadership is context specific and strength of which is mediated by a host of country-specific policies, cross-cultural research of school leadership under different and dynamic social, political, and cultural conditions (i.e. explaining why and how agency and educational leadership varies across cultures and context) is not well-developed (Brewer et al., 2020)[34]. Equally, while recent review of the literature on school leadership reforms acknowledges that the way in which practice of school leadership depends on the education system and policy context, there is insufficient attention given to the interaction with gender of school leader across context and systems (Pont, 2020). Third, developing country evidence about how principals may or may not choose to practice a given styles is lacking. Equally, research on the attitude towards or support for a given leadership style among various stakeholders (e.g. principals versus teachers, officials from the Ministry of Education and educational NGOs etc.) is missing[35]. Fourth, studies on the full instrumental significance of female leadership in education is lacking. We don't fully understand whether and how female leaders contribute to improving quality of teaching-learning, governance, and accountability in school education. Equally research is lacking on the challenges to female leadership at different levels of school leadership (ministers, owners, inspectors, principals, and directors) and whether there are policy bottlenecks which act as impediments to leadership in general at the school level and in particular with respect to female leaders. Given the above, below are some recommendations on potential research areas.

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[33] An exception is Krüger et al., (2005). The authors interviewed principals who have experienced premature departure themselves served as respondents. Study factors contributing to premature departure for male and female principals in primary and secondary education. The risk factors for premature departure were researched in four areas: the school organization, the working environment including the school culture, the selection procedure, and the principal him or herself. The results showed that the causes of premature departure are a combination of factors that are embedded in the context in which the leadership is performed and personal characteristics of the principal.

[34] Exceptions include Hallinger et al., (2017) and Al-Harthi & Al-Mahdy (2017). Hallinger et al. study principal leadership and teacher professional learning in China and Thailand using primary survey data. Al-Harthi & Al-Mahdy (2017) examine teachers' perceptions of the levels of distributed leadership practices and the indicators of school effectiveness using a sample of 635 teachers in Egypt and Oman.

[35] Examples of studies including multiple stakeholders are Bellibaş and Gümüş, 2021; George and Mensah, 2018; and Cravens and Zhao, 2022. Bellibaş and Gümüş surveyed both teachers and principals from 85 elementary and secondary Turkish schools and George and Mensah surveyed 92 teachers, 4 head masters and 4 assistant head masters in Ghana. Cravens and Zhao (2022) interviewed district supervisors and school principals in two regions of China.

1. Capturing the full range of behavioral pattern requires complex and detailed models to assess school leader effectiveness. This requires conducting specialized surveys on principals across schools[36]

2. Develop culturally comparative leadership measures and related questions that can be included in national education surveys that collect data on learning outcomes
3. Research that distinguishes between leadership or managerial practices (what principals do) from managerial skills (what principals can do).

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[36] Apart from TALIS, no global survey provides comparable cross-country micro datasets on principals. As acknowledged in section 2 of the report, practice of and beliefs related to leadership behaviors among principals are associated with multiple leadership styles which also differ vis-a-vis school context and principal's background.

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APPENDICES

Appendix 1: Sample composition and data collection

Purposive (snowball) sampling was used in selecting the respondents in all four case study sample countries. While the exact number of interviews competed varies from country to country, at least 15 stakeholders were successfully interviewed in each country. Regardless of the final sample size, in each country, we interviewed school principals, teachers and government officials from different locations. For the 3rd stakeholder group (i.e. non-school individuals), we have approached officials from the Ministry of Education (and related directorates) including local level education officials (e.g. District Education Officer, School Inspector), officials of national and international NGOs with education focus.

In most cases, face-to-face interview was carried out for 30-40 minutes though in some instances the interview was conducted online. A comparable interview protocol was used in each country, although some questions were reworded to better reflect local realities. In addition, country-specific questions were also included. The interviews were meant to capture the perceived barriers to the delivery of quality education as well as possible policy solutions. Depending on the expertise of the respondent stakeholder, however, discussion also covered additional country-specific issues. In terms of field management, the interviews were face to face in most cases. If the respondent did not speak English, a local interpreter was used.

Respondents have been asked to subjectively assess school leadership (e.g. attributes of an effective school principal as well as that of an effective school). As such, based on the data, it'll be possible to analyze how stakeholders rank the importance of school leadership vis-à-vis other attributes of an "effective school" such as high learning outcomes of school children, a supportive learning environment, continuous professional development of teachers, frequent monitoring of teaching, learning activities, engagement of parents and community, and physical facilities. Therefore, the dataset is ideal for a comparative analysis on the importance of school leadership across major stakeholders.

Table A: Country Selection Criteria

Criteria	Malaysia	Jordan	Pakistan	Nigeria
1. Lack of progress in access to education: Low intake			X	X
2. Lack of progress in school attainment: low completion rate			X	X
3. Lack of progress in literacy: high illiteracy rate			X	X
4. Inequality in access: gender gap in enrolment			X	X
5. Conflict / refugee crisis		X	X	X
6. Rising demand for private schools	X	X	X	X
7. Slow progress in improving student learning	X	X	X	X
8. No access to government data on child-level learning outcomes	X	X	X	X
10. Participation in international assessment: TIMSS	X	X		
11. Participation in international assessment: PISA	X	X		
12. Citizen-led assessment of learning outcomes			X	

Source: Asadullah (2018).

Appendix Table 2A: Determinants of subjective assessment of school effectiveness

VARIABLES	Attributes of an effective school			Attributes of an effective principal			Attributes of an effective teacher		
	school leadership	strong monitoring	Better infrastructure	Proven leadership	Well-motivated	Well qualified	Learning focused	Well-motivated	Well qualified
Female	-0.0211	0.0629	0.0265	-0.0537	-0.0663	-0.0367	-0.0635	-0.0957	-0.0309
	(0.0632)	(0.0753)	(0.0456)	(0.0748)	(0.0723)	(0.0751)	(0.0755)	(0.0727)	(0.0722)
Teacher	-0.144**	0.0372	0.0634	-0.0802	-0.00935	0.0806	0.0178	-0.0300	0.0653
	(0.0713)	(0.0849)	(0.0515)	(0.0844)	(0.0816)	(0.0847)	(0.0852)	(0.0821)	(0.0815)
Principal	-0.121	-0.170*	0.0275	-0.172*	-0.0644	0.0697	-0.0721	-0.116	0.0844
	(0.0831)	(0.0991)	(0.0601)	(0.0984)	(0.0951)	(0.0988)	(0.0994)	(0.0957)	(0.0950)
Jordan	0.700***	0.355**	-0.0703	0.00277	0.258*	0.104	0.101	0.171	0.0549
	(0.115)	(0.137)	(0.0828)	(0.136)	(0.131)	(0.136)	(0.137)	(0.132)	(0.131)
Nigeria	0.334***	0.0361	-0.0637	0.00912	-0.0284	0.332***	-0.382***	-0.0725	0.473***
	(0.0734)	(0.0875)	(0.0531)	(0.0869)	(0.0840)	(0.0872)	(0.0878)	(0.0845)	(0.0839)
Pakistan	0.481***	0.188**	0.111**	0.0911	0.119	0.294***	-0.202**	0.181**	0.355***
	(0.0720)	(0.0858)	(0.0521)	(0.0853)	(0.0824)	(0.0856)	(0.0861)	(0.0829)	(0.0823)
Constant	0.174***	0.278***	0.0395	0.405***	0.308***	0.207***	0.714***	0.370***	0.186**
	(0.0653)	(0.0779)	(0.0472)	(0.0774)	(0.0748)	(0.0777)	(0.0781)	(0.0752)	(0.0747)
Observations	200	200	200	200	200	200	200	200	200
R-squared	0.316	0.079	0.067	0.034	0.043	0.097	0.118	0.072	0.179

Notes: (i) OLS regression estimates. (ii) Omitted country category is Malaysia. (iii) Omitted stakeholder category is non-school respondents.

Appendix Table 2B: Determinants of subjective assessment of barriers to quality education and factors to improve student learning

VARIABLES	Barriers			Factors to improve learning		
	Lack of Leadership	Lack of motivated teachers	Lack of funding/facilities	More learning focused activities	Better training for teachers	More funding/facilities
Female	-0.0267	-0.0898	-0.00672	0.0308	0.00984	0.0499
	(0.0778)	(0.0789)	(0.0755)	(0.0719)	(0.0775)	(0.0342)
Teacher	-0.165*	0.0380	-0.0169	-0.0579	-0.0474	0.0153
	(0.0878)	(0.0890)	(0.0852)	(0.0812)	(0.0874)	(0.0386)
Principal	-0.0721	-0.0295	-0.112	-0.105	0.115	0.0306
	(0.102)	(0.104)	(0.0994)	(0.0947)	(0.102)	(0.0450)
Jordan	-0.190	-0.201	-0.101	0.00275	0.238*	0.0496
	(0.141)	(0.143)	(0.137)	(0.131)	(0.141)	(0.0620)
Nigeria	-0.214**	-0.0518	0.407***	-0.174**	0.0547	0.0333
	(0.0905)	(0.0917)	(0.0878)	(0.0836)	(0.0901)	(0.0397)
Pakistan	0.00831	-0.0820	0.108	-0.213**	0.105	0.113***
	(0.0887)	(0.0899)	(0.0861)	(0.0820)	(0.0883)	(0.0390)
Constant	0.616***	0.519***	0.391***	0.825***	0.535***	-0.0318
	(0.0805)	(0.0816)	(0.0781)	(0.0744)	(0.0802)	(0.0354)
Observations	200	200	200	200	200	200
R-squared	0.058	0.023	0.121	0.052	0.038	0.054

Notes: (i) OLS regression estimates. (ii) Omitted country category is Malaysia. (iii) Omitted stakeholder category is non-school respondents.