### Exhibit 23: Main Preparation Routes and Current Requirements for Principals of Schools

with Fourth or Eighth Grade Students

Reported by National Research Coordinators

		Current Requirements		
Country	Main Principal Preparation Route	Teaching Experience	Completion of Specialized School Leadership Training Program	Description of Policy Changes Within Past 10 Years
Albania		_	-	
Armenia	In addition to receiving their teaching qualifications, principals must have a principal certificate.	•	•	Since 2015, principals must attend compulsory training and have a principal certificate.
Australia	Principals are not required to have any specific qualifications in addition to teaching qualifications and teacher registration. However, most will have substantial experience as teachers and in leadership roles within schools, and may also have further qualifications in educational leadership.	•	0	No policy change
Austria	School principals in Austria come from the teacher ranks. Candidates must have at least 5 years of teaching experience in a school regulated by law and have completed at least 20 ECTS credits of the Professional Leadership in Schools university course or an equivalent certification. Upon nomination, a candidate must complete the Professional Leadership in Schools course (60 ECTS total) within 4.5 years.	•	•	The requirement for a certificate or degree in leadership was introduced in 2017. Every newly appointed principal now needs to have a certificate/degree or obtain one within 4.5 years of appointment. This requirement will be enforced for tenured principals beginning in 2023.
Azerbaijan	Principals should have a university degree; no specific major is required.	•	0	Starting in the 2013–2014 school year, principals are required to complete an examination and an interview.
Bahrain	All principals are former teachers. They also must have a diploma in leadership and school administration and pass an interview with the Ministry of Education.	•	•	In 2016, the requirements to hold a leadership and school administration diploma and to attend an in-service training program were introduced.
Belgium (Flemish)	There is no specific preparation route for principals, but candidates need both pedagogical competence and a higher education diploma. There are various forms of training, often organized by an umbrella organization in collaboration with their pedagogical counseling service.	0	0	No policy change
Bosnia and Herzegovina	No specific preparation routes.	•	0	No policy change
Bulgaria	Principals are required to have at least a bachelor's degree and should have several years of teaching experience.	•	0	No policy change
Canada	Provinces have different requirements for principal training. Most provinces require formal initial university training (resulting in multiple degrees, specifically, an undergraduate degree, teacher qualification degree, and a master's degree), relevant teaching experience, and additional principal qualifications.	•	•	Since 2019, principals in the province of Prince Edward Island are required to hold a master's degree, in addition to the basic requirements.
Chile	Most principals have a degree in education and at least 5 years of experience in the education system. Public school principals are required to be a teacher or hold a bachelor's degree and at least 4 years of teaching experience, complete a specialized program in school leadership, and be classified as "advanced" according to the Teacher Professional Development System Law.	•	•	In 2011, the Public Senior Management System (sistema de alta dirección pública) introduced a law that changed the way principals are appointed in public schools. In 2016, the requirement for applicants to be classified as "advanced" according to the Teacher Professional Development System Law was introduced.
Chinese Taipei	Elementary school principals should hold a Teacher's Certificate for elementary schools and meet qualifications of teaching and administrative service. Candidates without administrative qualifications must meet additional requirements. Junior high school principals should hold a Teacher's Certificate for secondary schools and meet qualifications of teaching and administrative service. If a candidate has served only as a junior high school teacher, he/she must have held the position of junior high school teacher for at least 5 years and served as a director of a school's first-level administrative unit for at least 3 years. If the candidate has additional experience other than as a junior high school teacher, there are other regulations.		•	The requirement to hold a Teacher's Certificate was officially adopted in 2011. The qualifications for years of experience in different roles and institutions have also been clarified.

Note: 60 European Credit Transfer and Accumulation System (ECTS) credits are equivalent to one full year of study or work. A dash (-) indicates data not provided.





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				(Continued)
	Main Principal Preparation Route	Current Requirements		
Country		Teaching Experience	Completion of Specialized School Leadership Training Program	Description of Policy Changes Within Past 10 Years
Croatia	There are no additional requirements beyond those for becoming a teacher. School expert service members (psychologists, pedagogues, special education experts, and librarians) that meet the requirements for work experience in education also may become principals.	•	0	No policy change
Cyprus	Most principals have a postgraduate degree. New principals complete a compulsory training program, during which they attend training sessions for 1 day per week during their first year as a principal. New principals are also matched with more experienced principals as mentors who provide support and consultation.	•	•	No policy change
Czech Republic	In addition to receiving their teacher qualification, principals are required to pass a school management course.	•	•	No policy change
Denmark	Preparation routes vary. Almost all principals have teaching experience, and some have served as the head of a department within a school or as a vice principal. It is common for principals to hold master's degrees in leadership or education or complete further education in these areas.	0	0	No policy change
Egypt	In addition to receiving their teaching qualifications, most principals have a degree in educational leadership.	•	•	The requirements for being a principal have changed; the candidate must have high qualifications, experience in education, leadership skills, pass training on various and multilevel professional development programs, and pass a set of tests for crisis management, attitudes, and decision making.
England	The vast majority of head teachers (principals) in publicly funded schools hold a teaching qualification, and most prepare for their first headship by completing the National Professional Qualification for Headship. However, neither of these steps is mandatory in either publicly funded or independent schools.	0	0	Since 2012, it is no longer mandatory for principals completing their first headship in a local authority maintained school to complete the National Professional Qualification for Headship (NPQH) before employment.
Finland	In addition to teaching qualifications at their respective education level, all principals must have a degree in educational administration or basic studies in educational leadership, or have acquired sufficient knowledge of educational administration and sufficient teaching experience in another way.	•	•	No policy change
France	Primary school director candidates must be members of the national school teachers team. They also must demonstrate 2 years of effective service as a primary teacher, receive a recommendation from the district inspector to apply to the Director of Departmental Services of Education, and complete an interview with the Director of Departmental Services of Education, a district inspector, and a school director.	•	0	No policy change
Georgia	Principal candidates should pass a Ministry of Education approved examination that consists of testing, an interview at the Ministry with a special commission, and an interview with the school board of trustees.	0	0	Before 2011, principals were randomly assigned to a school. Now, principal candidates may choose the school in which they serve as principal.
Germany	A teaching degree, professional experience, and a special qualification are required to become a principal. As a rule, the additional qualification takes the form of further training, but it is also possible to obtain it through a part- time master's program. At the beginning of the professional activity, the states' teacher education institutes offer optional training courses for preparation or accompaniment.	•	•	The completion of a specialized school leadership training program (including a school leadership degree program) became a requirement in 2016.
Hong Kong SAR	In addition to holding a teaching qualification and years of recognized teaching experience, candidates for public sector schools, including Direct Subsidy Schools, must complete the Certification for Principalship.	•	•	No policy change
		• Yes		



Reported by National Research Coordinators

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Country		Current Requirements		Description of Policy Changes Within Past 10 Years
		Completion of Specialized School Leadership Training Program		
Hungary	Principals must have 3 years of teaching experience and a professional qualification or degree in educational leadership.	•	•	The requirement to hold a professional qualification or degree in educational leadership was introduced in September 2012.
Iran, Islamic Rep. of	No specific preparation route.	0	0	No policy change
Ireland	The vast majority of candidates must have at least 5 years of teaching experience, and many have served in posts of responsibility within their previous position (e.g., deputy principal, assistant principal). Although not a requirement, many candidates also complete post-graduate courses in management or leadership. Newly appointed principals may complete the Misneach program, which helps them develop leadership skills and school management techniques.	•	0	In 2016, a standardized process was introduced for assessing the suitability of principal candidates and teachers applying for leadership and management roles.
Israel	In addition to receiving their teaching qualifications, principals must hold a Master of Arts/Master of Science(MA/MSc) and participate in a 2-year specialized school leadership program.	•	•	No policy change
Italy	Principals must have at least 5 years of experience as a tenured teacher.	•	0	No policy change
Japan	Candidates applying to public schools must pass a principal examination offered by the local board of education. In most cases (more than 90%), teaching experience is required to become a principal, but there are exceptions. School leadership training is not required to be a principal, but most candidates have received school leadership training before and after becoming principals based on the Special Act for Education Personnel for professional development.	•	0	No policy change
Jordan	Principals are selected from the pool of qualified teachers. They must have at least 5 years of teaching experience, a university degree, have at least 1 year of study in leadership and school administration, and pass an interview with the Ministry of Education.	•	•	No policy change
Kazakhstan	In addition to receiving their teaching qualifications, most principals have a degree in educational leadership.	•	•	No policy change
Korea, Rep. of	Teachers can become principals in several different ways. Experienced teachers can become educational professionals (school inspectors), and then vice principals, or advance directly to vice principals. Some candidates then complete the Ministry of Education's principal qualification program. This program covers the national curricula, encouraging learning, leadership, school management, schools' budget plans, and senior principals' mentoring, etc. Experienced teachers may also become principals through the open recruitment system, which allows school members to apply for a principal position.	•	•	No policy change
Kosovo	Principals have teacher qualifications and a degree in educational leadership.	•	•	Since 2011, principals must have teacher qualifications and have completed training in educational leadership.
Kuwait	For a teacher to become a principal, she/he must have a university degree from the Department of Education at Kuwait University, college of basic education, or any equivalent university degree from another country. She/he must then be promoted to the head of a department, and pass a test and interview. For the head of a department to be promoted to vice principal and for the vice principal to be promoted to principal, she/he must pass an interview.	•	•	No policy change
Latvia	Principals must have a bachelor's degree in pedagogical education, but most also have a master's degree in education pedagogy.	0	0	Before 2018, candidates with a bachelor's degree in a major other than pedagogical education could complete a 72-hour pedagogical course to become a principal.
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	Main Principal Preparation Route	Current Requirements		
Country		Teaching Experience	Completion of Specialized School Leadership Training Program	Description of Policy Changes Withir Past 10 Years
Lebanon	Principals are typically teachers that are selected by the Ministry of Education.	٠	•	No policy change
Lithuania	The Minister of Education and Science stipulates requirements for principals. All candidates are evaluated, and the individual with the highest evaluation and who meets all the requirements assumes the position.	•	0	Since 2015, the National School Evaluation Agency evaluates only some personal competencies (not all of them as before). All other competencies will be evaluated by a process determined by the Ministry of Education and Science.
Malaysia	All principals must have at least 10 years of experience in school administration. They must also possess a (prerequisite) National Professional Qualification for Educational Leaders (NPQEL) certificate.	•	•	Based on current needs, the Ministry of Education has ordered <i>Institut Aminuddin Baki</i> (IAB) to implement a National Professional Qualification for Executive Leadership (NPQEL) course/training for potential headmasters (for Grades 1–6) or principals (for Grades 7–11). Since 2014, the NPQEL program is a prerequisite for principalship. As of July 2019, about 10 cohorts that have completed the training.
Malta	In addition to teaching qualifications, heads of school need to have at least a post-graduate diploma in education specializing in leadership, management, and administration.	•	•	No policy change
Montenegro	Principals must fulfill the conditions for an educator, or a professional assistant (a pedagogue, a psychologist, and a special education teacher) for preschool institutions, as well as for a teacher or professional associate for school. Principals must also pass the professional exam and have 5 years of teaching/education experience. The principal of a public institution is appointed and released by the Minister, upon the request of the school board (whose members include representatives of the Ministry).	•	•	No policy change
Morocco	Candidates must attend a 1-year school administration program at the Regional Center for the Professions of Education and Training.	•	•	The requirement to attend the 1-year program at the Regional Center was introduced in 2016.
Netherlands	In addition to receiving their teaching qualifications, most principals take courses in educational leadership.	0	•	No policy change
New Zealand	There are no additional requirements beyond teacher qualifications.	•	0	No policy change
North Macedonia	In addition to receiving their teaching qualifications, all principals should have a leadership for director of school license.	•	•	No policy change
Northern Ireland	In addition to receiving their teaching qualifications, most principals undertake the Professional Qualification for Headship qualification and various other leadership courses offered by other providers. However, these additional qualifications are not mandatory.	•	0	No policy change
Norway	All principals must hold teacher qualifications and have teaching experiences. Many also complete leadership courses.	٠	0	No policy change
Oman	Principals are selected according to seniority and experience in teaching and classroom management. Qualified candidates have to attend a 2-year leadership training program conducted by the Specialized Institute for Professional Training of Teachers.	•	•	Previously, the Ministry of Education provided a 2-week Leadership and Supervision skills workshop as well as a leadership diploma from the Sultan Qaboos University (SQU) for candidates who do not hold a university degree. Now, these candidates must pass a 2-year program. Qualified applicants usually attend the 2-week workshop during the academic year.
Pakistan	The most experienced teachers are selected to be principals.	•	0	No policy change





SOURCE: IEA's Trends in International Mathematics and Science Study - TIMSS 2019 Downloaded from http://timss2019.org/encyclopedia/download

Reported by National Research Coordinators

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		Current Requirements		
Country	Main Principal Preparation Route	Teaching Experience	Completion of Specialized School Leadership Training Program	Description of Policy Changes Within Past 10 Years
Philippines	Candidates must have 1 year of experience as Head Teacher, 2 years as a Teacher-in-Charge, 2 years as a Master Teacher, or 5 years as a Teacher III. They should also have 40 hours of relevant training, a performance of Very Satisfactory (VS) for the last 2 years, and a certification of no pending administrative case. Applicants must pass the National Qualifying Examinations for School Heads, which is conducted by the National Educators Academy of the Philippines.	•	•	A revision of the Philippine Professional Standards for School Heads includes policy amendments that have been implemented for aspiring principals or school heads in the Philippine public schools.
Poland	Most principals have teaching qualifications, have teacher experience, and have completed postgraduate educational management studies. Although it is possible to become a school principal without having teacher qualifications, it is rare.	0	•	No policy change
Portugal	School principals are fully certified teachers with at least 5 years of experience who have completed either specific training in school and/or educational and school administration, held administrative positions within the school (e.g., as assistant principal, president, vice- president and/or member of the executive board of directors), or have relevant curriculum vitae in school administration and school management. Most schools in Portugal are grouped into clusters offering all grades from primary to secondary education (Grades 1–12) with a single Board of Administrators.	•	•	No policy change
Qatar	All principals are required to have an accredited university degree (at least a bachelor's) as well as a degree from the faculty of education, or from other faculties such as master's or a doctorate.	•	•	No policy change
Romania	Principals are selected among the teachers in a school or educational establishment. They must hold a degree in higher education, a Didactic Degree I or a PhD, at least 8 years of teaching experience, and be a member of the national body of educational management experts.	•	•	No policy change
Russian Federation	Candidates must receive a management qualification and have work experience in teaching positions or receive teacher qualifications and further qualification in management.	•	0	Under the current Law of Education of 2012, principals are subject to mandatory assessment. The procedure and terms of the assessment are established by the founders of these educational organizations.
Saudi Arabia	In addition to receiving their teaching qualifications, most principals hold a higher degree or have completed a training course in educational leadership.	•	•	No policy change
Serbia	Principals should have a master's degree and a relevant bachelor's degree. They should also have a teaching or school counseling license, principal's training and license, and at least 8 years of work experience as a teacher or school counselor.	•	0	Since 2018, the standards of the competencies of principals of educational institutions are adopted by the Minister of Education instead of the National Education Council (NEC). The minister now appoints a principal, whereas before the minister only approved the school board's decision on the candidate. Candidates are now expected to complete a training program; after finishing the program, candidates prepare a portfolio documenting their competencies and report on the research they have undertaken in their institution. The first licensing exam was organized in 2018, and all appointed principals are expected to pass a licensing exam by the end of 2021.

● Yes O No





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	Main Principal Preparation Route	Current Requirements		
Country		Teaching Experience	Completion of Specialized School Leadership Training Program	Description of Policy Changes Within Past 10 Years
Singapore	All principals start their careers in education as classroom teachers and go through a mandatory preservice teacher education course at the National Institute of Education, Nanyang Technological University. Typically, candidates have first served in some middle management role (e.g., as Department Head, which also has teaching duties), before they are appraised, interviewed, and selected to participate in a full-time, 6-month Leaders in Education Programme conducted by the National Institute of Education, Nanyang Technological University, and fully paid for by the Ministry of Education.	•	•	No policy change
Slovak Republic	Principal candidates must have a minimum of 5 years of pedagogical practice, achieve first attestation, and accomplish the Leadership Programme for principals and other senior staff within 3 years after becoming a principal.	•	•	No policy change
South Africa	The minimum requirement is a 4-year tertiary qualification; certification through the South African Council of Educators, with proof of registration; and 7 years of teaching experience.	•	0	No policy change
Spain	In addition to receiving their teaching qualifications and passing the competitive exam, principals in public schools need 5 years of experience and to complete a specialized school leadership training program provided by the Ministry of Education and Vocational Training or the corresponding regional authorities.	•	•	The requirement to have a certificate of a specialized school leadership training taught by the Ministry of Education and Vocational Training was introduced in 2013.
Sweden	The National School Leadership Training Programme, or an equivalent program, is compulsory for newly employed principals in public and private institutions. Once employed, principals must begin the training program as soon as possible and complete the program within 4 years.	•	•	No policy change
Turkey	Appointment of school principals is regulated by the Administrative Appointment Regulation for Educational Institutions Affiliated to Ministry of National Education. A principal candidate must be a graduate of a higher education institution, work as a Ministry teacher, be qualified to teach at the type of educational institution to which they apply, and cannot have been discharged as an administrator in the last 4 years. The candidate also must have served as a principal; served at least 1 year as the founding principal, deputy principal, or teacher authorized to act as a principal; or served as a branch manager or higher position in the Ministry.	•	0	Since 2017, school principals are appointed for 4 years. At the end of this term, they are revaluated to be reappointed. The same person cannot work as school principal in the same school more than 8 years.
United Arab Emirates	Principals must have at least 3 years of experience as a vice principal, a master's degree, and a minimum IELTS (International English Language Testing System) band score of 6. Having a certificate in educational leadership is preferred. Vice principals must have a teaching degree from a university program and at least 5 years of teaching experience.	•	Ο	The master's degree and IELTS requirements were added for the 2017-2018 academic year.
United States	Preparation routes vary by state. In a majority of states, principals are expected to hold a master's degree, typically in education leadership or education administration, have several years of teaching experience, obtain a license for school administration, and pass an examination and background check.	•	•	There is no federal law detailing principal requirements. Under the Every Student Succeeds Act (ESSA; 2015), states have the autonomy to determine principal qualifications. ESSA eliminated the requirement under the No Child Left Behind Act (NCLB; 2002) for principal evaluation systems and/or linking results to student test scores.



student test scores.



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Same as United Arab Emirates

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Dubai, UAE

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	Main Principal Preparation Route	Current Requirements			
Country		Teaching Experience	Completion of Specialized School Leadership Training Program	Description of Policy Changes Within Past 10 Years	
Benchmarking Participants					
Ontario, Canada	Principals are required to hold an undergraduate degree (BA, BS, etc.), a teacher qualification degree (Bachelor of Education), and either 2 subject specializations or a master's degree. Principals also must be qualified in at least 3 teaching levels (primary, junior, intermediate, or senior) and complete parts 1 and 2 of a Principals Qualifications Program (PQP).	•	•	No policy change	
Quebec, Canada	In addition to a bachelor's degree in education, principals must complete a specialized higher education diploma consisting of 30 credits in a second cycle of university training program.	•	•	No policy change	
Moscow City, Russian Fed.	In addition to receiving their teaching qualifications, all principals have a degree in educational leadership.	•	•	Under the current Law of Education of 2012, principals are subject to mandatory assessment. The procedure and terms of the assessment are established by the founders of these educational organizations. The assessment procedure of the Moscow school principal is defined by Moscow Department of Education and Science. It is carried out once in 3–5 years (depending on for what period the principal was assessed) and requires passing qualification tests and an interview with the Assessment Commission.	
Gauteng, South Africa	Same as South Africa				
Western Cape, South Africa	Same as South Africa				
Madrid, Spain	Same as Spain				
Abu Dhabi, UAE	Same as United Arab Emirates				

● Yes O No



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