



Policy Goals

1. Setting Clear Expectations for Teachers

While there are clear expectations for what students should learn and what teachers are supposed to do in Papua New Guinea, policies could more explicitly guide teachers towards instructional improvement.

Status

Emerging



2. Attracting the Best into Teaching

While opportunities for career growth may help attract aspiring teachers, working conditions may deter some candidates.

Emerging



3. Preparing Teachers with Useful Training and Experience

While substantial practical professional experience is integrated into pre-service training, the minimum level of education required of teachers is lower than in most high-performing systems.

Emerging



4. Matching Teachers' Skills with Students' Needs

With limited incentives to attract teachers in hard-to-staff schools and no incentives to increase teachers of subjects for which there is an instructor shortage, teacher distribution may be inefficient or inequitable.

Latent



5. Leading Teachers with Strong Principals

Policies require principals to support teachers to improve quality, and principals are empowered to do so through an induction program and ongoing training.

Established



6. Monitoring Teaching and Learning

A variety of criteria is used to assess teacher performance, consistent with good practice, but the system makes limited use of large-scale assessments to inform policy and teaching.

Established



7. Supporting Teachers to Improve Instruction

Teachers are required to participate in some professional development, but policies could focus more on practice-oriented training such as teacher networks and observation.

Emerging



8. Motivating Teachers to Perform

A teacher's performance can influence his or her salary increases, and teachers can be dismissed for offences such as child abuse.

Established



Overview of SABER-Teachers

There is increasing interest across the globe in attracting, retaining, developing, and motivating great teachers. Student achievement has been found to correlate with economic and social progress (Hanushek and Woessmann 2007, 2009; Pritchett and Viarengo 2009; Campante and Glaeser 2009). And teachers are key to this achievement: recent studies have shown that teacher quality is the main school-based predictor of student achievement; several consecutive years of outstanding teaching can offset the learning deficits of disadvantaged students (Hanushek and Rivkin 2010; Rivkin, Hanushek, and Kain 2005; Nye and Hedges 2004; Rockoff 2004; Park and Hannum 2001; Sanders and Rivers 1996). However, formulating the appropriate teacher policies to ensure that every classroom has a motivated, supported, and competent teacher remains a challenge. This is largely because the evidence on the impact of many teacher policies remains insufficient and scattered, the impact of many reforms depends on specific design features, and teacher policies can have very different impacts depending on the context and other existing education policies.

SABER-Teachers aims to help fill this gap by collecting, analyzing, synthesizing, and disseminating comprehensive information on teacher policies in primary and secondary education systems around the world. SABER-Teachers is a core component of SABER (Systems Approach for Better Education Results), an initiative of the World Bank's Education Global Practice. SABER collects information about different education systems' policy domains, analyzes it to identify common challenges and promising solutions, and makes it widely available to inform countries' decisions on where and how to invest in order to improve educational quality.

SABER-Teachers collects data on ten core areas of teacher policy in order to offer a comprehensive descriptive overview of the policies in place in each participating education system (box 1). Data are collected in each participating education system by a specialized consultant using a uniform questionnaire, ensuring comparability of information across different

education systems. Data collection focuses on the rules and regulations governing teacher management systems. This information is compiled in a comparative

database. Interested stakeholders can access the database for detailed information organized into categories that describe how different education systems manage their teaching forces, as well as copies of supporting documents. The full database is available at the [SABER website](#).

Box 1. Teacher policy areas for data collection

1. Requirements to enter and remain in teaching
2. Initial teacher education
3. Recruitment and employment
4. Teachers' workload and autonomy
5. Professional development
6. Compensation (salary and non-salary benefits)
7. Retirement rules and benefits
8. Monitoring and evaluation of teacher quality
9. Teacher representation and voice
10. School leadership

To offer informed policy guidance, SABER-Teachers analyzes these data to assess how well each system's teacher policies promote student achievement, based on the global evidence to date. Specifically, SABER-Teachers assesses each education system's progress in achieving eight teacher policy goals (box 2).

Box 2. Teacher policy goals for evaluation

1. Setting clear expectations for teachers
2. Attracting the best into teaching
3. Preparing teachers with useful training
4. Matching teachers' skills with students' needs
5. Leading teachers with strong principals
6. Monitoring teaching and learning
7. Supporting teachers to improve instruction
8. Motivating teachers to perform

Figure 1. Eight Teacher Policy Goals



All high-performing education systems fulfill these eight teacher policy goals to a certain extent in order to ensure that every classroom has a motivated, supported, and competent teacher. These goals were identified through a review of research studies on teacher policies, as well as analysis of policies of top-performing and rapidly improving education systems. Three criteria were used to identify the teacher policy goals: they had to be (i) linked to student performance through empirical evidence; (ii) a priority for resource allocation; and (iii) actionable, meaning that they identify actions that governments can take to improve education policy. The eight teacher policy goals exclude other objectives that countries might want to pursue to increase the effectiveness of their teachers, but on which there is too little empirical evidence at present to allow specific policy recommendations.

By classifying countries according to their performance on each of the eight teacher policy goals, SABER-Teachers can help diagnose the key challenges to cultivating effective teachers. For each policy goal, the SABER-Teachers team identified policy levers (actions that governments can take to reach these goals) and indicators (that measure the extent to which governments are making effective use of the policy levers). Using these policy levers and indicators, SABER-Teachers classifies the progress of education

systems toward achieving each of the eight goals using a four-tiered scale (latent, emerging, established, and advanced). The scale assesses the extent to which a given education system has put in place the type of teacher policies related to improved student outcomes (annex 1). The main objective of this assessment is to identify the strengths and weaknesses of the teacher policies of an education system and pinpoint possible areas for improvement. For a more detailed report on the eight teacher policy goals, policy levers, and indicators, as well as the evidence base supporting them, see Vegas et al. (2012).

The main focus of SABER-Teachers is on policy design, not policy implementation. SABER-Teachers analyzes the teacher policies formally adopted by a given education system. This type of analysis is an important first step toward strengthening the policy and institutional frameworks that policymakers control most directly and that influence how well a system functions. At the same time, policies “on the ground”—that is, policies as they are actually implemented—may differ quite substantially from policies as originally designed. In fact, they often do differ due to the political economy of the reform process, lack of capacity among the organizations charged with implementing them, and/or the interaction between these policies and specific contextual factors. Since SABER-Teachers collects only limited data on policy implementation, the analysis of teacher policies presented in this report should ideally be complemented with other data-gathering efforts that focus on how well teacher policies are actually implemented on the ground.

This report presents results of the application of SABER-Teachers in Papua New Guinea. It describes Papua New Guinea’s performance in each of the eight teacher policy goals, alongside comparative information on education systems that have consistently scored highly on international student achievement tests and have participated in SABER-Teachers. Additional detailed descriptive information on the teachers policies of the education systems of Papua New Guinea and other education systems can be found on the [SABER-Teachers website](#).

Papua New Guinea's Teacher Policy System Results

Goal 1: Setting clear expectations for teachers

Emerging ●●○○

Setting clear expectations for student and teacher performance is important to guide teachers' daily work and to align the resources necessary to help teachers constantly improve instructional practice. In addition, clear expectations can help ensure coherence among different key aspects of the teaching profession, such as initial teacher education, professional development, and teacher appraisal.

SABER-Teachers considers two policy levers that school systems can use to reach goal one: (1) clear expectations for what students should know and be able to do, and (2) useful guidance on teachers' use of time to improve instruction at the school level.

(1) In Papua New Guinea, the government has established expectations for what students should learn and what teachers should do. According to the Education Act (1983), the Curriculum Development and Assessment Division of the Department of Education is responsible for developing the curriculum in all schools.

The HR Policy Information and Operations Manual lays out the official tasks that teachers are expected to carry out. These obligations include attending to the needs of students, assisting head teachers and other education leaders in the efficient management of the school and the education system as a whole, delivering the curriculum to students as determined by the National Education Plan and the National Curriculum Statement, and respecting communities' customs and values.

(2) Guidance on teachers' use of time could focus more on instructional improvement. Teachers' working time in Papua New Guinea is officially defined as the number of hours spent at school, which is expected to be roughly 7.5 hours per day, although the expected number of hours of teacher attendance may vary by type of school.

Teachers are expected to teach 79 percent of their professional working time. Global experience suggests this expectation may be conducive to learning because it recognizes that teachers need to devote some time to non-teaching tasks, such as lesson planning, analysis of student work, and professional development.

Non-teaching tasks related to instructional improvement are not officially part of teachers' basic tasks in Papua New Guinea. Successful education systems such as those of Ontario (Canada), Finland, Japan, South Korea, and Singapore devote considerable teacher time at the school level to activities related to instructional improvement, such as collaborative teacher analysis of instructional practice, as well as mentoring and professional development (Darling-Hammond and Rothman 2011; Darling-Hammond 2010; Levin 2008). In addition, these systems tend to devote a smaller share of teachers' time to actual contact time with students than do other systems, and a larger share to teacher collaboration, on-site professional development, and research on the effectiveness of various teaching strategies. Japan, for example, devotes about 40 percent of teachers' working time to this type of activity, while Ontario currently devotes 30 percent (Darling-Hammond and Rothman 2011). Table 1 highlights some examples.

Table 1. Teachers' official tasks related to school improvement

	Mentor peers	Collaborate on school plan	Design the curriculum	Participate in school evaluation
Papua New Guinea				
Solomon Islands	✓	✓		✓
Samoa	✓	✓		✓
Philippines	✓	✓		✓
South Korea				
Singapore	✓	✓	✓	✓

Source: SABER-Teachers database.

Goal 2: Attracting the best into teaching

Emerging ●●○○

The structure and characteristics of a teaching career can make it more or less attractive for talented individuals. Talented people may be more inclined to become teachers if they see that entry requirements are on par with those of well-regarded professions, compensation and working conditions are adequate, and attractive professional development opportunities exist.

SABER-Teachers considers four policy levers that school systems can use to reach goal two: (1) requirements to enter the teaching profession; (2) competitive pay; (3) appealing working conditions; and (4) attractive career opportunities.

(1) In Papua New Guinea, teachers are required to have at least a bachelor's degree to teach. Primary and secondary education teachers in Papua New Guinea receive their initial teacher training in courses taken after 12 years of schooling. Entry requirements for employment in the teaching service are described in the Joint Secretary and Chairman of the Teaching Service

Commission's Circular No. 1 (2001). Primary and secondary education teachers are required to have a bachelor's degree, pass an assessment, and have a minimum amount of practical professional experience (included in the degree program).

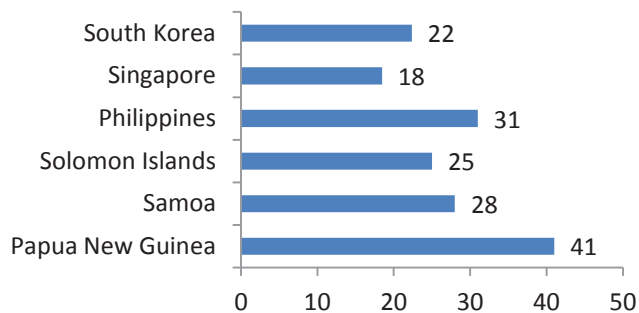
(2) Teacher pay is appealing for talented candidates. According to Schedule 1A of the Teaching Service Pay Fixation Agreement for 2014–16, a teacher who has finished the practical experience component of a diploma or degree program will receive a salary in the range of PGK 15,734–19,230 per year (US\$ 6,435–7,864). This is likely to be an attractive starting salary, given that annual GDP per capita in Papua New Guinea is US\$ 2,184.

Pay does have the potential to rise substantially over the course of a teacher's career, reaching between PGK 53,959 and 65,949 per year (US\$ 22,068–26,972) at the highest grade (TS12). In addition, according to policy, pay varies according to teacher performance, with performance evaluations informing salary scales. Given this dependence on performance, high-performing candidates may be more likely to enter the profession.

(3) Working conditions may not be appealing enough to attract talented individuals to the teaching profession. Working conditions may play an important role in the decision to become a teacher. Talented candidates who have opportunities in other professions may be discouraged from choosing to teach if working conditions are poor.

While there are national school standards in Papua New Guinea for infrastructure, hygiene, and sanitation, there is no documentation on how many schools are in compliance with these standards. Another indicator of teacher working conditions, the student-teacher ratio, is high relative to those of high-performing international education systems, where the maximum number of students per teacher is typically 30 in primary school and 20 in secondary school. In Papua New Guinea, the primary school student-teacher ratio is 41:1 and the secondary school ratio, 31:1 (figure 2).

Figure 2. Student-Teacher Ratio, Primary School



Source: SABER-Teachers database and UNESCO Institute for Statistics.

(4) Opportunities for career advancement may be sufficiently appealing to attract talented individuals to the teaching profession. Teachers in most education systems are offered opportunities for promotion to principal positions at some point in their careers. In addition to these “vertical” promotions, most high-performing education systems offer teachers the possibility of “horizontal” promotions to academic positions that allow them to grow professionally as teachers, yet remain closely connected to instruction, instead of moving to managerial positions (OECD 2012; Darling-Hammond 2010).

Promotion policies in Papua New Guinea offer teachers opportunities for career advancement. Teachers have the option of applying for either school administration posts (such as school principals) or academic leadership positions. Promotion opportunities are linked to the results of performance appraisals.

Goal 3: Preparing teachers with useful training and experience

Emerging ●●○○

It is crucial to equip teachers with the skills that they need to succeed in the classroom. To be successful, teachers need subject matter and pedagogical knowledge, as well as classroom management skills and a great deal of teaching practice. Good preparation puts all teachers on an equal footing, giving them a common framework for improving their practice.

SABER-Teachers considers two policy levers that school systems can use to reach goal three: (1) minimum

standards for pre-service training programs, and (2) required levels of classroom experience for all teachers.

(1) Initial teacher education may not be providing prospective teachers with the necessary knowledge and skills to be successful in the classroom. Virtually all high-performing countries require that teachers have an educational level equivalent to ISCED 5A (defined as a research-oriented bachelor’s degree requiring roughly four years to complete). Some systems, such as that of Finland, also require a research-based master’s degree (OECD 2011). Primary and secondary school teachers in Papua New Guinea are required to complete initial teacher education at the ISCED 5B level (defined as a career-oriented postsecondary degree of fewer than 4 years) (table 2).

Table 2. Required Educational Level of Primary School Teachers

	At or below ISCED 4A	ISCED 5B	ISCED 5A	Above ISCED 5A
Papua New Guinea		✓		
Solomon Islands		✓		
Samoa		✓		
Philippines			✓	
Singapore			✓	
South Korea			✓	

Source: SABER-Teachers database.

(2) There are requirements for practical classroom experience for teachers-in-training. Practical experience is an important factor in teaching quality. The more teachers try out their pedagogical theories, subject-matter knowledge, and classroom management skills, the better prepared they will be for their job. Most high-performing systems require teacher entrants to have a considerable amount of classroom experience before becoming independent teachers; some of these systems provide mentoring and support during the first and even second year on the job (Darling-Hammond 2010; Ingersoll 2007). In Papua New Guinea, practical professional experience is required for both primary and secondary school teachers-in-training. At the University

of Goroka, where all domestic teachers are trained, practical experience is required and laid out in the Academic Rules and Regulations Handbook. According to this handbook, students are required to enroll in microteaching and teaching practice courses. In addition, both University staff and school supervisors are required to observe teachers in training while they practice in the classroom and to provide assessments of their performance.

In high-performing systems, programs aimed at facilitating new teachers’ transition into teaching for both primary and secondary school are usually longer than seven months. These programs have the potential to make teachers more effective in the classroom and reduce teacher turnover.

Goal 4: Matching teachers’ skills with students’ needs

Latent ●○○○

Ensuring that teachers work in schools where their skills are most needed is important for the equity and efficiency of an education system. First, it is a way of ensuring that teachers are distributed as efficiently as possible among schools, making sure that there are no shortages of qualified teachers in any given grade, education level, or subject. Second, it is a means to ensure that all students in a school system have an equal opportunity to learn. Without purposeful allocation systems, it is likely that teachers will gravitate towards schools serving better-off students or located in more desirable areas, thereby deepening existing inequalities in the system.

SABER-Teachers considers two policy levers that school systems can use to reach goal four: (1) incentives for teachers to work in hard-to-staff schools; and (2) incentives for teachers to teach subjects for which there is a critical shortage of instructors.

(1) There may not be sufficient incentives in place to address teacher shortages in hard-to-staff schools. Attracting effective teachers to work in hard-to-staff schools (schools that are in disadvantaged locations or serve underprivileged populations) is a challenge for many countries and often requires a specific set of

incentives. According to the Teaching Service Commission’s Teacher’s Handbook on their Entitlements (2013), teachers in Papua New Guinea who work in remote areas identified by the Provincial Education Board are paid a disadvantaged school allowance. This allowance may effectively encourage teachers to work in remote areas; however, high-performing education systems offer multiple incentives for teachers to teach in hard-to-staff schools. Some examples are highlighted in table 3.

Table 3. Incentives for Teachers to Teach in Hard-to-Staff Schools

	Promotion	Higher basic salary in hard-to-staff schools	Monetary bonus	Subsidized education	Housing support
Papua New Guinea			✓		
Solomon Islands			✓		✓
Samoa			✓		✓
Philippines			✓		
Singapore					
South Korea	✓				✓

Source: SABER-Teachers database.

Note: Singapore has no specific incentives to attract qualified teachers to hard-to-staff schools, but it does have a centrally managed teacher deployment system that ensures an equitable and efficient distribution of teachers.

At the same time, several factors influence transfer priorities, which enable experienced teachers to work in a diversity of schools. In addition to teaching experience, transfer decisions depend on a teacher’s job title and his or her performance, as assessed by school authorities and external evaluators.

(2) Papua New Guinea has identified critical-shortage subject areas, but there is no policy to systematically identify or address such shortages. Critical-shortage subjects—that is, subjects for which there is an insufficient number of teachers to meet student needs—are present in many education systems. Successful systems develop policies and offer incentives for teachers to teach these subjects. In Papua New Guinea, these subjects include secondary-level math and science, as well as technical subjects related to vocational skills. However, no documentation is available on incentives,

such as opportunities for promotion or housing support, offered in Papua New Guinea to encourage teachers to teach these subjects. Some examples are highlighted in table 4.

Table 4. Incentives for Teachers to Teach Critical-Shortage Subjects

	Promotion	Higher basic salary	Monetary bonus	Subsidized education	Housing support
Papua New Guinea					
Solomon Islands					
Samoa				✓	
Philippines		✓	✓		
Singapore					
South Korea					

Source: SABER-Teachers database.

Note: Singapore instead directly controls how many candidates enter pre-service teacher training by subject.

Goal 5: Leading teachers with strong principals

Established ●●●○

The quality of school heads is an important predictor of student learning. Capable principals can act as instructional leaders, providing direction and support to improve instructional practice at the school level. In addition, effective principals help attract and retain competent teachers.

SABER-Teachers considers two policy levers that school systems can use to reach goal five: (1) investment by the education system in developing qualified school leaders; (2) the decision-making authority given to school principals to support and improve instructional practice.

(1) In Papua New Guinea, education policies require principals to receive induction and ongoing training. Research from high-performing education systems suggests principals can develop leadership skills through supported work experience or through specific training courses. High-performing systems such as those of Japan, South Korea, Shanghai (China), and Singapore

require applicants for principal positions to participate in specific coursework and/or a specialized internship or mentoring program aimed at developing essential leadership skills (OECD 2012; Darling-Hammond 2010). Table 5 compares the existence of these support elements in Papua New Guinea and other countries in the region.

Table 5. Mechanisms to Support the Development of Principals’ Leadership Skills

	Courses or other training requirements	Mentoring or internship program
Papua New Guinea	✓	✓
Solomon Islands		
Samoa		✓
Philippines	✓	✓
Singapore	✓	✓
South Korea	✓	

Source: SABER-Teachers database.

In addition to the requirements for becoming a teacher in Papua New Guinea, the Education Gazette on Performance-Based Duty Statements in Secondary School (DOE and TSC 2002) requires applicants for principal positions in secondary schools to have management and administrative experience as a deputy principal. According to the 2014–2019 Master Training Plan, principals are required to take part in an induction program and will receive ongoing training from the Department of Education. These trainings will teach principals how to evaluate and support teachers (table 5). There are no mechanisms, however, to reward superior principal performance with monetary bonuses.

(2) Principals in Papua New Guinea are officially required to monitor teacher performance. They are also expected to provide support and guidance to teachers in order to improve instructional practice. Once education systems select talented candidates to become principals, these leaders need to structure their time to focus on improving instruction (OECD 2012; Barber and Mourshed 2007). High-performing education systems such as those in Finland, Ontario (Canada), and Singapore treat their principals as instructional leaders. Principals are expected to be knowledgeable about teaching and curriculum matters, as well as to provide guidance and

support to teachers. They evaluate teachers, provide feedback, assess the school's needs for professional development, and direct instructional resources where they are most needed (Darling-Hammond and Rothman 2011).

According to the aforementioned Education Gazette on Performance-Based Duty Statements in Secondary School, principals in Papua New Guinea are expected to teach 5.3–8 hours per week and to perform administrative, management, and supervisory work 28.75–31.4 hours per week. In addition to supervising and evaluating teaching staff and overseeing curriculum implementation, principals are expected to oversee school-based professional development programs, submit school reports to relevant authorities, and maintain school accounts, among other tasks.

Goal 6: Monitoring teaching and learning

Established ●●●○

In order to devise strategies for improving teaching and learning, it is essential to assess how well teachers are teaching and whether students are learning. First, identifying low-performing teachers and students is critical, as it enables education systems to provide struggling classrooms with adequate support to improve. Second, teacher and student evaluations also help identify good practices that can be shared across the system to improve school performance.

SABER-Teachers considers three policy levers that school systems can use to reach goal six: (1) gathering and making available data on student achievement to inform teaching and policy; (2) adequate systems to monitor teacher performance; (3) multiple mechanisms to evaluate teacher performance.

(1) In Papua New Guinea, systems to assess student learning are in place, but they may not inform policy. All high-performing education systems ensure that sufficient student data is gathered to inform teaching and policy, although they do so in very different ways. Regardless of the mechanism a country decides to use, high-performing systems ensure that three main functions are fulfilled: the system regularly collects relevant and complete data on student achievement; public authorities are able access these data in order to

inform policy; and a feedback mechanism sends these data and relevant analyses to the school level to help teachers improve instructional practice. In Papua New Guinea, the Curriculum Standards Monitoring Test (CSMT) is a national large-scale assessment that has been administered to students in grades 3, 5, and 7. Data from this large-scale national assessment have been made available to schools; however, these data have not been used to inform policy. In addition to the CSMT, in 2012 Papua New Guinea participated in the Pacific Islands Literacy and Numeracy Assessment (PILNA), a regional assessment that evaluates student performance vis-à-vis those of students in other education systems in the region. As of 2014, the data from this assessment had not been disseminated to key stakeholders or used to inform policy.

(2) While internal systems exist to evaluate teacher performance, no mandatory external evaluations of teacher performance are in place. According to the Teaching Service Act of 1988, a member of the Teaching Service can apply to their department head to complete a professional assessment. As indicated in the Department of Education's Secretary's Circular No. 17 (2006), head teachers have full responsibility for teacher inspection, except in special circumstances where there are allegations of nepotism. In such cases, inspectors external to schools are expected to intervene.

(3) A variety of criteria are used to evaluate teacher performance. Research suggests that no single method of evaluating teacher performance is fail-safe. Most high-performing systems conduct teacher evaluations using multiple data collection mechanisms and varied evaluative criteria. Ideally an evaluation system includes a comprehensive teacher evaluation framework that combines student learning results, teachers' portfolios, classroom observation, and feedback from students and/or parents. International experience and research on the topic both suggest that none of these approaches taken separately can produce a balanced and objective evaluation of teacher performance.

Research has shown that evaluations combining multiple methods and sources of information (such as student academic achievement, classroom observations and student survey results) can be more effective. In Papua New Guinea, as in many top-performing education systems, explicit criteria are used to assess teacher performance, including subject-matter knowledge, compliance with the curriculum, teaching methods employed, use of homework in the classroom, methods used to assess students, and teacher-student interactions. These criteria are laid out in the Report Guidelines-Base Level for Secondary Inspections. Table 6 highlights some of these criteria. In addition, principals and colleagues participate in teacher assessments, which also include classroom observations. According to the HR Policy Information and Operations Manual, a performance appraisal is required in order for a teacher to receive an increase in salary.

Table 6. Criteria used to evaluate teacher performance

	Subject matter knowledge	Teaching methods	Student assessment methods	Students' academic achievement
Papua New Guinea	✓	✓	✓	
Solomon Islands	✓	✓	✓	✓
Samoa	✓	✓	✓	✓
Philippines	✓	✓	✓	✓
Singapore	✓	✓	✓	
South Korea	✓	✓	✓	

Source: SABER-Teachers database.

Goal 7: Supporting teachers to improve instruction

Emerging ●●○○

Support systems are necessary to improve instruction at the school level. In order to constantly improve instructional practice, teachers and schools need to be able to analyze the specific challenges that they face in classroom teaching, be able to access information on best practices to address these challenges, and receive specific external support tailored to their needs.

SABER-Teachers considers three policy levers that school systems can use to reach goal seven: (1) making teacher professional development opportunities available; (2) ensuring that teacher professional development activities are collaborative and focused on instructional improvement; and (3) making sure development training and/or support is assigned based on perceived needs.

(1) Teachers are formally required to participate in teacher professional development. In Papua New Guinea, participating in professional development is a requirement for remaining in the teaching profession. However, the number of required days of professional development per year is not specified (table 7). Additionally, while teacher professional development is provided, teachers must bear some of the costs, which may discourage them from participating in such trainings.

Table 7. Days per year recommended/required of professional development, primary school teachers

	Unknown/Undefined	1 to 5 days	6 to 9 days	10 or more days
Papua New Guinea	✓			
Solomon Islands	✓			
Samoa	✓			
Philippines	✓			
South Korea		✓		
Singapore				✓

Source: SABER-Teachers database; Darling-Hammond (2010).

(2) Teacher professional development training does not include activities that research has found to be associated with instructional improvement. Research suggests that effective teacher professional development is collaborative and provides opportunities for in-school analysis of instructional practice. As mentioned earlier, high-performing education systems such as those of Japan and Ontario (Canada) devote as much as 30 percent of teachers' school time to professional development and instructional improvement activities. These activities include participation in teacher or school networks, engaging in research and induction programs, and mentoring (table 8). In Papua New Guinea, teacher policy mentions traditional training methods as well as some high-impact

training methods, such as induction and/or mentoring programs (see Department of Education 2014).

Table 8. Types of professional development

	Observation visits	Teacher networks	School networks	Research	Mentoring/coaching
Papua New Guinea					✓
Solomon Islands					
Samoa					
Philippines	✓	✓	✓	✓	✓
South Korea		✓		✓	✓
Singapore	✓	✓	✓	✓	✓

Source: SABER-Teachers database.

(3) Teacher professional development may not be assigned based on perceived needs in Papua New Guinea. Assigning professional development training to teachers when they score poorly on performance evaluations is one way to help improve instructional practice. Such training can be targeted to meet the needs of specific teachers. In Papua New Guinea's case, however, no written policy requires this kind of targeting. But in practice, a teacher who receives an unsatisfactory evaluation will be assigned to a supervisor and teachers' performance evaluations are used to assign professional development training.

Goal 8: Motivating teachers to perform

Established ●●●○

Adequate mechanisms that motivate teachers give school systems a way to signal their serious intent to achieve education goals, make the teaching career attractive to competent individuals, and reward good performance while ensuring accountability.

SABER-Teachers considers three policy levers that school systems can use to reach goal eight: (1) linking career opportunities to teachers' performance; (2) establishing mechanisms to hold teachers accountable; (3) linking teacher compensation to performance.

(1) In Papua New Guinea, promotion opportunities are linked to performance on the job. According to the

Teaching Service Commission's Teachers' Handbook on their Entitlements (2013), new teachers are granted a provisional registration number for the first twelve months (or, in some cases, up to three years) of teaching before they are able to fully register with the Teacher Education Division of the Department of Education. Their classroom performance, as assessed by standards officers, is a factor in determining whether and when a teacher can fully register.

(2) Official mechanisms are in place to hold teachers accountable. Requiring teachers to meet some standards to remain in the teaching profession can facilitate the removal of ineffective teachers. In Papua New Guinea, teachers are required to attend an annual National In-Service Training Week organized by the Department of Education. In most high-performing systems, teacher performance is evaluated annually; the same is true in Papua New Guinea, where teachers must pass yearly evaluations.

In most high-performing systems, there are official mechanisms to address cases of misconduct, child abuse, absenteeism, and poor performance. In Papua New Guinea, poor punctuality, unexcused absences, and poor performance are categorized as minor disciplinary offences. If they become chronic, however, they can in some cases add up to a major offense, but they do not generally lead to dismissal. According to the HR Policy Information and Operations Manual, teachers absent from the classroom for two weeks without prior approval are suspended from the payroll and their unexplained absence can lead to dismissal. The Teaching Service Act of 1988 specifies mechanisms for responding to criminal offences committed by teachers, such as child abuse, which can also lead to dismissal.

(3) Teacher compensation is linked to teacher performance at the school level. In Papua New Guinea, teachers can receive salary increases based on their performance. According to the HR Policy Information and Operations Manual, teachers can progress up the incremental scale within their salary level only if they can demonstrate that they satisfy the requirements to move to the next increment, as documented in a performance appraisal completed by a senior school officer.

No policies exist regarding individual or school-level monetary bonuses for teachers based on performance.

In high-performing systems, performance-based monetary bonuses are sometimes used as tools for improving teacher motivation (table 9).

Table 9. Incentives for high performance

	Individual monetary bonus	School-level bonus
Papua New Guinea		✓
Solomon Islands	✓	
Samoa		
Philippines		
Singapore	✓	
South Korea	✓	✓

Source: SABER-Teachers database.

Acknowledgements

This report was prepared by Vidya Putcha (Knowledge and Innovations Team, Education Global Practice, World Bank), with inputs from Andrew Trembley (Knowledge and Innovations Team, Education Global Practice, World Bank), under the direction of Halsey Rogers (Lead Economist, Education Global Practice, World Bank). Seema Prasad and Adrian Alamu of the South Pacific Board for Educational Assessment carefully conducted the research and data collection. We are grateful for the assistance of Fred Brooker of the Australia Department of Foreign Affairs and Trade and that of Ana Raivoce and Visesio Pongi of the South Pacific Board for Educational Assessment.

References

- Attfield, Robin. 2011. *Development of Accreditation for School Directions: Discussion Paper*. World Bank, Washington, DC.
- Barber, M., and M. Mourshed. 2007. *How the World's Best-Performing School Systems Come Out on Top*. McKinsey & Co, London.
- Campante, F., and E. L. Glaeser. 2009. *Yet Another Tale of Two Cities: Buenos Aires and Chicago*. NBER Working Paper 15104. National Bureau of Economic Research (NBER), Cambridge, MA.
- Chaudhury, N., J. Hammer, M. Kremer, K. Muralidharan, and F. H. Rogers. 2006. "Missing in Action: Teacher and Health Worker Absence in Developing Countries." *Journal of Economic Perspectives* 20:1: 91–116.
- Darling-Hammond, L. 2010. "Steady Work: How Countries Build Successful Systems." In L. Darling-Hammond, *The Flat World and Education: How America's Commitment to Equity Will Determine Our Future*, 163–93 (New York, NY: Teachers College, Columbia University 2010).
- Darling-Hammond, L., and R. Rothman. 2011. *Teacher and Leader Effectiveness in High-Performing Education Systems*. Alliance for Excellent Education, Washington, DC.
- Habyarimana, J. 2007. *Characterizing Teacher Absence in Bulgaria: Evidence from 2006 Unit Cost Study*. World Bank, Washington, DC.
- Hanushek, E. A., and S. G. Rivkin. 2010. "Generalizations about Using Value-Added Measures of Teacher Quality." *American Economic Review* 100 (2): 267–71.
- Hanushek, E., and L. Woessmann. 2007. "The Role of Education Quality in Economic Growth." World Bank Policy Research Working Paper 4122. World Bank, Washington, DC.
- . 2009. "Schooling, Cognitive Skills, and the Latin American Growth Puzzle." NBER Working Paper 15066. NBER, Cambridge, MA.
- Herrmann, M. A., and J. E. Rockoff. 2009. "Work Disruption, Worker Health, and Productivity: Evidence from Teaching." Columbia Business School and NBER, New York, NY, and Cambridge, MA.
- Ingersoll, R. 2007. *A Comparative Study of Teacher Preparation and Qualifications in Six Nations*. Consortium for Policy Research on Education, Philadelphia, PA.
- Levin, B. 2008. *How to Change 5000 Schools*. Cambridge, MA: Harvard Education Press.
- Miller, R. T., R. J. Murnane, and J.B. Willett. 2008. "Do Teacher Absences Impact Student Achievement? Longitudinal Evidence from One Urban School District." *Educational Evaluation and Policy Analysis* 30 (2): 181–200.
- Nye, B., S. Konstantopoulos, and L.V. Hedges. 2004. "How Large Are Teacher Effects?" *Educational Evaluation and Policy Analysis* 26 (3): 237–57.
- OECD (Organisation for Economic Co-operation and Development). 2009. *PISA 2009 Results: What Students Know and Can Do—Student Performance in Reading Mathematics and Science*. Paris: OECD. <http://dx.doi.org/10.1787/9789264091450-en>.

- . 2011. *Building a High-Quality Teaching Profession: Lessons from around the World*. Paris: OECD.
- . 2012. *Preparing Teachers and Developing School Leaders for the 21st century*. Paris: OECD.
- Park, A., and E. Hannum, E. 2001. "Do Teachers Affect Learning in Developing Countries? Evidence from Matched Student-Teacher Data from China." Paper presented at the Social Science Research Council "Rethinking Social Science Research on the Developing World in the 21st Century Conference," June 7–10, Park City, Utah.
- Mullis, I. V. S., M. O. Martin, E. J. Gonzalez, and A. M. Kennedy. 2003. "International Student Achievement in Reading." In I. V. S. Mullis, M. O. Martin, E. J. Gonzalez, and A. M. Kennedy, *PIRLS 2001 International Report: IEA's Study of Reading Literacy Achievement in Primary Schools*, 23–31 (Chestnut Hill, MA: Boston College). http://timss.bc.edu/pirls2001i/pdf/P1_IR_Ch01.pdf.
- Pritchett, L., and M. Viarengo. 2009. Producing Superstars for the Economic Mundial: The Mexican Predicament with Quality of Education. PEPG Working Paper 09-01. Program on Education Policy and Governance (PEPG), John F. Kennedy School of Government, Harvard University, Cambridge, MA.
- Rivkin, S. G., E. A. Hanushek, and J. F. Kain. 2005. "Teachers, Schools, and Student Achievement." *Econometrica* 73(2): 417–58.
- Rockoff, J. E. 2004. "The Impact of Individual Teachers on Student Achievement: Evidence from Panel Data." *American Economic Review* 94(2): 247–52.
- Rogers, F. H., and E. Vegas, E. 2009. "No More Cutting Class? Reducing Teacher Absence and Providing Incentives for Performance." Policy Research Working Paper 4847. The World Bank, Washington, DC.
- Sanders, W. L., and J. C. Rivers. 1996. "Cumulative and Residual Effects of Teachers on Future Student Academic Achievement. Research Progress Report. University of Tennessee Value-Added Research and Assessment Center, Knoxville, TN.
- Vegas, E., S. Loeb, P. Romaguera, A. Paglayan, N. Goldstein, A. Ganimian, A. Trembley, and A. Jaimovich. 2012. What Matters Most in Teacher Policies? A Framework for Building a More Effective Teaching Profession. SABER Report. Human Development Network, World Bank, Washington, DC.

Official documents

- Papua New Guinea, Government of. Department of Education. N.d. HR Policy Information and Operations Manual.
- . 2014a. Master Training Plan 2014–2019.
- . 2014b. Schedule 1A of the Teaching Service Pay Fixation Agreement for 2014–16.
- . 2006. Secretary's Circular No. 17.
- . 1988. Teaching Service Act.
- . 1983. Education Act.
- . DOE and TSC (Department of Education and Teaching Service Commission). 2002. Education Gazette on Performance-Based Duty Statements in Secondary School.
- . Teaching Service Commission. 2013. Teacher's Handbook on their Entitlements.
- . 2001. Joint Secretary and Chairman of the Teaching Service Commission's Circular No. 1.
- . University of Goroka. N.d. Academic Rules and Regulations Handbook

Annex 1: SABER-Teachers Ratings

The SABER-Teachers team has identified policy levers (actions that governments can take) and indicators (that measure the extent to which governments are making effective use of these policy levers) for each of the eight policy goals referenced in this country report. For example, for Teacher Policy Goal 1, Setting Clear Expectations for Teachers, the SABER-Teachers team has identified the following policy levers and indicators:

Table A.1.1 Setting Clear Expectations for Teachers

Policy Levers	Indicators
A. Are there clear expectations for teachers?	1. Are there standards for what students must know and be able to do?
	2. Are the tasks that teachers are expected to carry out officially stipulated?
B. Is there useful guidance on the use of teachers' working time?	1. Are teachers' official tasks related to instructional improvement?
	2. Does the statutory definition of working time for primary school teachers recognize non-teaching hours?
	3. What is the share of working time allocated to teaching for primary school teachers?

Each goal is defined in the first paragraph of the section relating to that goal in the country report. Policy levers for achieving the goal are identified in the second paragraph and the remaining text in each section provides details about the indicators that measure each of the levers.

Using the policy levers and indicators, the SABER-Teachers tool classifies the performance of an education system on each of the eight teacher policy goals, using a four-category scale (latent, emerging, established, and advanced) that describes the extent to which the system has put in place teacher policies associated with improved student outcomes.

This four-tiered rating system represents a continuum of education systems, from education systems with no teacher policies at all (or, in some cases, policies that are detrimental to the encouragement of learning) to more comprehensive, developed systems with teacher policies oriented toward learning. SABER-Teacher ratings can be defined in the following manner:

- **Advanced**—Systems that are rated “advanced” on a particular policy goal have put in place multiple teacher policies conducive to learning for each policy lever used to achieve that goal.
- **Established**—“Established” systems have at least one policy and/or law in place that uses those policy levers.
- **Emerging**—“Emerging” systems have only some appropriate policies in place to achieve the policy goal.
- **Latent**—“Latent” systems have no or few teacher policies.

See Vegas et al. (2012) for more details on these definitions and a detailed review of the policy levers and indicators used by the SABER-Teachers tool.

For more information regarding SABER-Teachers methodology, please contact: HelpdeskTP@worldbank.org.

The Systems Approach for Better Education Results (SABER) initiative produces comparative data and knowledge on education policies and institutions, with the aim of helping countries systematically strengthen their education systems. SABER evaluates the quality of education policies against evidence-based global standards, using new diagnostic tools and detailed policy data. The SABER country reports give all parties with a stake in educational results—from administrators, teachers, and parents to policymakers and business people—an accessible, objective snapshot showing how well the policies of their country's education system are oriented toward ensuring that all children and youth learn.

This report focuses specifically on policies in the area of teacher policies.

This work is a product of the staff of The World Bank with external contributions. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent. The World Bank does not guarantee the accuracy of the data included in this work. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

