

The Importance of Teacher Policies

Research suggests that teacher quality is the main school-based predictor of student achievement and that several consecutive years of outstanding teaching can offset the learning deficits of disadvantaged students (Hanushek & Rivkin 2006; Nye, et al. 2004; Park & Hannum 2001; Rivkin, et al. 2005; Rockoff 2004; Sanders 1998; Sanders & Rivers 1996; and Vignoles, et al. 2000). However, it is not yet clear exactly which teacher policies can raise teacher effectiveness (Goldhaber 2002 and Rivkin, et al. 2005). Thus, devising effective policies to improve teaching quality remains a challenge.

There is increasing interest across the globe to attract, retain, develop, and motivate great teachers. While the World Bank has ample experience in supporting teacher policy reforms in developing countries, until recently there was no systematic effort to offer data and analysis that can provide policy guidance on teacher policies.

A new tool, **Systems Approach for Better Education Results (SABER)-Teachers**, fills this gap by collecting, analyzing, synthesizing, and disseminating comprehensive information on teacher policies in primary and secondary education across a range of different education systems.ⁱ In this report, we discuss the findings from the application of *SABER-Teachers* in Serbia. Our goal is to enable policymakers to learn about how other countries address the same policy challenges related to teacher management and thus how to make well-informed policy choices that will lead to improved learning outcomes.ⁱⁱ

Overview of SABER-Teachers

***SABER-Teachers* collects data on 10 core teacher policy areas in order to offer a comprehensive overview of teacher policies in each education system (see Box 1).** It is important to highlight that *SABER-Teachers*' main focus is on the *policies* formally adopted by education systems. While in some cases the data collected also address how the teacher policy goals are achieved in practice, the nature of our data collection approach (based on interviews with key informants and official document review) do not allow for a thorough assessment of policy implementation. Therefore, complementary research will be useful in most settings.

Box 1. Teacher policy areas

10 Teacher Policy areas	
Requirements to enter and remain in teaching	Compensation (salary and non-salary benefits)
Initial teacher education	Retirement rules and benefits
Recruitment and employment	Monitoring and evaluation of teacher quality
Teachers' workload and autonomy	Teacher representation and voice
Professional development	School leadership

To analyze these data and offer informed policy guidance, SABER-Teachers uses data collected on the 10 policy areas to assess progress on eight teacher policy goals. These goals were identified through a review of evidence of research studies on teacher policies, and the analysis of policies of top performing and rapidly improving education systems. By classifying countries according to their performance on these goals, SABER - Teachers can help diagnose the key challenges that countries face in ensuring they have effective teachers. The 8 teacher policy goals are presented in Figure 1.

Figure 1: 8 Teacher Policy Goals



SABER-Teachers used three criteria to select these teacher policy goals. They are: (i) linked to performance through evidence provided by research and studies; (ii) a high priority for resource allocation; and (iii) actionable, that is, actions 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 teachers. These were excluded because there is to date insufficient empirical basis on which to make specific policy recommendations, either because evidence on policy interventions in that area remains unclear or because the top-performing education systems take very different approaches to reach these objectives.ⁱⁱⁱ For a more detailed report on the eight teacher policy goals and the evidence supporting this selection, please see Vegas, et al. (2010).

1. Setting clear expectations for teachers

Established ○○○○

Clear expectations guide teachers' work.

Expectations for student and teacher performance influence how potential entrants perceive the profession. The clearer these expectations are, the more likely a school system is to get the type of teacher it seeks. Second, expectations guide teachers' work. The more specified they are, the better teachers can organize their time and resources to meet them. Finally, expectations can help align the goals of different key aspects of the profession (e.g., pre-service training, professional development and teacher appraisals). The more institutionalized these expectations are, the more likely all of these aspects will be working towards a common purpose and thus the more likely it will be achieved.

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

In Serbia, there are clear expectations for what students and teachers are supposed to do.

Serbia has defined a set of national standards that inform teachers of required subject content and measurable indicators of learning that should be achieved by students at different grades. In addition, the tasks that teachers are expected to carry out are officially stipulated, and recognize the diversity of teacher tasks outside of basic instruction.

Policies recognize the diversity of teacher tasks and provide time to complete them.

Laws and regulations in Serbia recognize the diverse tasks of teachers. Teachers are expected to teach, supervise students, grade assessments, integrate student populations, stand in for absent teachers, mentor teachers, participate in administrative tasks, collaborate

in school planning, and take part in internal evaluations.

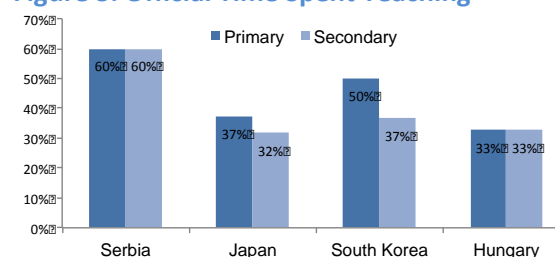
Teachers particularly need enough time to complete all tasks outside of class time. In high-performing systems, up to 50 percent of teachers' work time is for conducting tasks other than teaching. High-performers such as Japan focus most of the non-teaching time on professional development and curriculum planning. Serbia's policies are similar: teachers are expected to devote 60 percent of their working time to teaching, 30 percent to preparing lessons, 5 percent to administrative duties, and the remainder to extracurricular tasks.

Figure 2. Official Teacher Tasks

Teacher tasks related to instructional improvement				
	Serbia	Japan	Shanghai	Singapore
Mentor peers	✓	✓		✓
Collaborate on school plan	✓	✓	✓	✓
Design curriculum		✓		✓
Evaluate school	✓	✓		✓

Source: SABER-Teacher Data

Figure 3. Official Time Spent Teaching



Source: SABER-Teacher Data

2. Attracting the Best into Teaching

Emerging ○○○○

Attracting talented people to become teachers is essential for several reasons (Guarino, Santibáñez & Daley 2006). More capable applicants make more capable teachers (Boyd, et al. 2008). Top candidates maximize the impact of teacher training. When the quality of student teachers is low, training is likely to focus more on making up for their weaknesses and less on building strengths. Finally, luring top talent into teaching has a multiplier effect: qualified teachers raise the esteem of the profession, which further attracts strong candidates. SABER - Teachers considers four policy levers school systems can use to reach this goal: (1) minimum requirements to enter training and teaching; (2) competitive pay; (3) appealing working conditions; and (4) attractive career opportunities.

In Serbia, teachers are required to have an advanced degree but have no other meaningful requirements. In Serbia, secondary school teachers are required to complete a bachelor's degree, and primary school teachers are required to complete a bachelor's degree and additional teacher-specific coursework. Despite a rigorous education requirement, teachers are not required to complete any other requirements to become a teacher, such as completing a written examination, interview, or practical assessment or have prior classroom experience.

With only one path to enter the profession, Serbia may be limiting the pool of potential teachers. In Serbia, all teachers must pass through a consecutive training model, whether they are beginning their careers or are experienced non-teaching professionals. Successful education systems offer alternative paths to the profession for mid-career professionals, which include tailored curriculum or different requirements.

Teacher compensation includes benefits but does not vary with performance. Teacher pay is subject to a specific scale that does not account for teacher effort or results. People who could be tomorrow's high-performing teachers may instead enter a profession that explicitly rewards hard work or high performance.

Working conditions are unattractive. Working conditions, such as student-teacher ratios and physical conditions play a role in job satisfaction. While there are standards of infrastructure in Serbia, only 35 percent of school buildings meet these requirements. Future teachers may prefer to go work in professions in more attractive environments.

Effective teachers have opportunities to grow and advance in their careers. Opportunities for growth over a lifetime attract talented people to the career and raise the prestige of the profession. In Shanghai, talented members of the profession may later become administrative and academic leaders. Similarly, in Serbia, teachers may apply to become principals and lead teachers. Career advancement in Serbia is influenced by past teacher performance.

Figure 4. Requirements to enter the profession

Requirements to become a teacher					
	Serbia	Japan	Shanghai	Singapore	Turkey
Pass written test		✓	✓		✓
Interview-stage assessment		✓	✓	✓	
Minimum practical experience		✓		✓	✓
Practical Experience Assessment		✓		✓	✓

Source: SABER-Teacher Data

3. Preparing Teachers with Useful Training and Experience Established

Teachers need to be equipped with the skills they need to be effective in the classroom. Few individuals are born effective teachers. Teachers need subject matter knowledge, classroom management skills, and lots of practice in order to be successful in a classroom. In addition, preparation puts all teachers on an equal footing, giving them a common framework to work and improve their practice.

SABER - Teachers considers two policy levers school systems can use to reach this goal: (1) minimum standards for pre-service training programs; (2) required classroom experience for all teachers.

Serbia lacks the necessary regulation to require adequate teacher preparation.

Although there is a law requires a minimum amount of pre-service training, there are no policies for accreditation or detailing do not yet exist. Teacher training colleges are not yet required to undergo certification.

Those who want to become a primary or secondary school teacher are required to complete coursework beyond a bachelor's degree. However, there are no official stipulations or recommendations for how much time teachers must dedicate to pedagogy theory, instruction methods, or subject content. Entrance to teacher preparation programs is not very selective; in 2011, there were 1061 applicants to teacher education programs and 908 (86%) gained entry. Entry is not determined by needs of the teaching profession.

Teacher entrants are not required to have practical experience through a mentoring

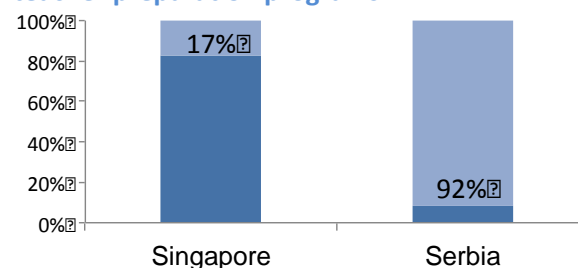
program. Research has shown that practical experience is an important factor in teaching quality. The more practical experience teacher entrants have, they the better prepared they will be for their job. In Serbia, while current reforms will require teachers to gain teaching practice, policies stipulating the details of the requirement do not yet exist. If fully implemented, these programs have the potential to make teachers more effective in the classroom and reduce teacher turnover.

Figure 5. Models of teacher training, Selected Systems

Many pathways to teaching career				
	Serbia	Japan	Shanghai	Singapore
Concurrent Model			✓	✓
Consecutive Model	✓	✓		✓
Alternative Model			✓	

Source: SABER-Teacher Data

Figure 6. Percent of applicants admitted to teacher preparation programs



Source: SABER-Teacher Data

4. Matching Teachers' Skills with Students' Needs

Emerging

Ensuring that teachers work in schools where their skills are most needed is important for promoting equity and efficiency. Strategic teacher deployment is a way to ensure all students in an education system have an equal opportunity to learn. Without purposeful incentives, teachers tend to gravitate towards schools with better working conditions, which often serve students already performing well (Boyd, et al. 2005a; Hanushek, et al. 2004). Second, it is a way of ensuring teachers are distributed efficiently—i.e., to minimize the number of surplus teachers at a given grade, subject, or geographic area. Finally, ensuring teachers are a good match for their school can also increase their effectiveness and reduce turnover rates (Boyd, et al. 2002, 2005b; Jackson 2010).

SABER - Teachers considers two policy levers school systems can use to reach this goal: (1) incentives for teachers to work in hard-to-staff schools; and (2) incentives for teachers to teach critical shortage areas.

Some policies exist to distribute quality teachers in all schools. Attracting effective teachers to work in hard-to-staff schools, which may serve students from disadvantaged populations, is a challenge for many countries, and often requires a complex set of incentives.

Using seniority as a basis for approving transfer requests may permit the most seasoned teachers to leave hard-to-staff schools, leaving less experienced and potentially less capable teachers at underserved schools. In Serbia, transfers are not determined by teacher experience. In Serbia, official policy dictates that teacher transfers are based exclusively on school needs.

Serbia has formally identified subjects with an insufficient supply of teachers but has limited means to redress shortages. In almost all countries, teachers of certain subjects are of particularly high demand. Respondents in Serbia identified a shortage of teachers in mathematics and foreign languages, especially English. While the government recognizes shortage subjects, they do not provide incentives to attract more teachers to these subjects and increase the supply of teachers of those subjects. High performers identify, monitor, and use incentives to attract teachers of shortage subjects. For example, when the United Kingdom faced shortages of mathematics and science teachers, they offered payments to people studying to become teachers in those subjects to defray education costs (OECD, 2011).

Figure 7. Incentives for Teachers in Hard-to-staff Schools, Selected Systems

Incentives for teachers in hard-to-staff schools				
	Serbia	Japan	Shanghai	Korea
Promotion Opportunities		✓	✓	✓
Higher Basic Salary		✓		
Monetary Bonus			✓	
Subsidized Education			✓	
Housing Support		✓		✓

Source: SABER-Teacher Data

5. Leading Teachers with Strong Principals

Emerging

The quality of school leaders is second only to classroom teaching as a predictor of student learning (Eberts & Stone 1988; Leithwood, et al. 2006). Quality principals attract and retain quality teachers (Boyd, et al. 2009; Ingersoll 2001a, 2001b; Papa Jr., Lankford & Wyckoff 2002). In addition, capable principals can spearhead much-needed change at the school level, so having strong leaders is important not only to ensure acceptable levels of performance but also to drive improvements. Finally, good principals can facilitate teachers' work and continuous improvement. The more capable a principal is, the more he or she can support teachers, create a sense of community, make teachers feel valued and ease their anxiety about external pressures (Mulford 2003).

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

In Serbia, principals must complete specific coursework, but may lack practical experience.

To ensure principals are trained at their job, they must have a minimum number of 3 years of professional teaching experience, possess a degree beyond a bachelor's degree and complete a written test. However, their preparation does not require any practical learning experience, such as an internship or taking part in an induction program. While principals may have the skills that can be taught in a classroom, they may lack the practical experience needed to be effective. Some high-performing systems require participation in an

internship or mentoring program to help administrators be practiced when they start their job. Additionally, some high-performing systems provide incentives for principals to improve school quality: Serbia does not provide any such incentives.

Principals are expected to support teachers in improving their instruction. More than just administrators, effective principals support teachers in their work. Principals in Serbia are explicitly expected to support teachers to improve instruction and their classroom practice. Principals are expected to serve as leaders in their schools, and take part in teacher and school evaluations, enumerating teacher responsibilities.

Figure 8. Requirements to become a Principal, Selected Education Systems

Requirements to become a principal					
	Serbia	Japan	Shanghai	Singapore	Korea
Specific Coursework	✓	✓	✓	✓	✓
Internship		✓	✓	✓	✓
Mentoring Program		✓	✓	✓	✓

Source: SABER-Teacher Data

6. Monitoring Teaching and Learning

Established ○○○○

Assessing teacher effectiveness is essential to devise strategies for improving learning outcomes. First, teacher and student evaluations help identify good practices, which can then be shared among the teaching staff to improve school performance. Second, identifying low-performing teachers and students is necessary to support them in a timely manner. Education systems need to be able to know when to provide struggling classrooms with adequate support to improve. Finally, such information is useful for accountability purposes.

SABER - Teachers considers three policy levers school systems can use to reach this goal: (1) availability of data on student achievement in order to inform teaching and policy; (2) adequate systems to monitor teacher performance; (3) multiple mechanisms to evaluate teacher performance.

There are few methods to monitor student performance throughout the system. National student assessments can help authorities identify student groups, schools, and classes that are in need of attention. In Serbia, the only national assessment is the final examination at age 14. While this assessment allows student scores to be tracked to teachers, earlier assessments could help identify struggling individual and groups of students in need of greater teacher training or more focused or tailored resources.

There are some systems in place to monitor teacher performance. In Serbia, official policy requires teachers regularly participate in

internal performance evaluations, but the results of teacher performance evaluations can not be tracked over time. It is not known whether these policies are put into practice.

Few mechanisms are used to evaluate teacher performance. Research suggests that no single method of evaluating teacher performance is failsafe. Most high performing systems conduct teacher evaluations using a multiplicity of mechanisms of data collection and varied criteria for assessment. In Serbia, performance evaluations include only self-assessments, principals, and classroom observation as sources. The most effective evaluation methods make use of student achievement data and external evaluators.

In Serbia, a variety of criteria are used to assess teacher performance. These include subject matter knowledge, teaching methods, student assessment methods, and student academic achievement.

Figure 9. Methods Used to Monitor Teachers

Systems to Monitor Teacher Performance					
	Serbia	Japan	Shanghai	Singapore	Korea
Required Performance Evaluations	✓	✓	✓	✓	✓
Performance Monitored by Authorities	✓	✓	✓	✓	✓
Teachers can be tracked over time		✓	✓	✓	✓

Source: SABER-Teacher Data

7. Supporting Teachers to Improve Instruction

Emerging ○○○○

Helping teachers be more effective in the classroom is vital. All teachers can improve, regardless of how effective they are at one point in time. Support mechanisms are necessary to help teachers reach their potential and perform at their best. Thus, during periods of transitions, teachers will need additional help to sustain their performance. Finally, support mechanisms can go a long way in preventing burnout and reducing turnover. Even motivated teachers may choose to leave if they are consistently ineffective, do not know how to improve and receive little support.

SABER - Teachers considers three policy levers school systems can use to reach this goal: (1) availability of teacher professional development opportunities; (2) activities that are focused on collaboration and instructional improvement; (3) making sure teacher professional development is assigned based on needs.

Teachers are required to take part in a short period of professional development.

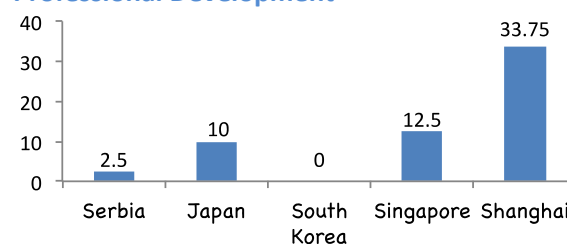
Teachers in Serbia are required to take part in 20 hours of professional development annually. Given the high returns of effective professional development, Serbia would benefit from increasing the number of hours of professional development. The topics covered in professional development are extensive, and include instructional practice, classroom management, and content knowledge.

Serbia's policies prioritize some highly effective mediums of professional development. Research suggests that effective teacher professional development is collaborative and provides opportunities for the analysis in-situ of instructional practice, as opposed to one-time workshops or conferences. Methods used in Serbia's activities include trainings that focus on improving teacher practice by incorporating classroom observation and evaluation of teacher competencies into professional development. In

addition, they include teacher peer learning within the schools. High-performing systems use professional development activities that are practice oriented, including teacher networks, visits to observe highly effective teachers, and mentoring or coaching opportunities.

Teacher professional development is assigned based on perceived needs. To ensure support is customized to each teacher's needs, high performing systems use performance evaluations to develop customized professional development plans or assign mentors. In Serbia, self and principal evaluations inform professional development, but may result in being assigned a supervisor.

Figure 10. Required Days per Year of Professional Development



Source: SABER-Teacher data

Figure 11. Professional Development Methods

Professional Development Techniques Focused on Instructional Improvement				
	Serbia	Shanghai	Japan	Singapore
Observation visits	✓	✓	✓	✓
Teacher Networks	✓	✓	✓	✓
School Networks		✓	✓	✓
Research			✓	✓
Mentoring or Coaching		✓	✓	✓

Source: SABER-Teachers data

8. Motivating Teachers to Perform

Latent 

Adequate incentives for teachers can contribute to effective teaching and learning.

First, incentives are a way for school systems to signal their seriousness in achieving certain goals. The more aligned incentives are with the behaviors and outcomes they want to produce in teaching, the more likely they will obtain them. Second, incentives are also a way to recognize teachers' work. Teaching is a challenging job and incentives can let teachers know the results they have achieved are valued so that they continue working hard to sustain them. Finally, some types of incentives can also influence the profile of the teaching profession and make it more competitive, dynamic, and performance-driven.

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

Promotions, but not hiring practices, are informed by performance. To ensure teachers are capable before granting them long-term contracts, authorities need both a probation period upon initial hires and the right to not offer long-term contracts to teachers who do not perform during the probation period. In Serbia, there is a mandatory probation period, but performance on the job does not factor into whether teachers receive appointments. Promotions decisions, on the other hand, are informed by past performance.

There are some minimum mechanisms to hold teachers accountable. Requiring teachers to meet some standards in order to remain in the teaching profession can facilitate the removal of ineffective teachers. In Serbia, primary and secondary school teachers are required to participate in professional development and performance evaluations as a requisite to maintain their credentials. However, they cannot be dismissed for poor performance, incompetence, or absenteeism.

Additionally, it is vital to be able to remove unsafe teachers from the profession. In Serbia, teachers can be dismissed for misconduct and child abuse.

Teacher compensation is not linked to performance. To align teacher incentives, systems that are most effective at motivating teachers provide incentives to perform well by providing incentives such as performance bonuses. In Serbia, high performing teachers do not receive bonuses as rewards for their work. In addition, performance evaluations have no effect on teacher compensation.

Figure 12. Incorporating Teacher Performance

Employment Decisions Influenced by Performance					
	Serbia	Japan	Shanghai	Singapore	Korea
Open-Ended Contracts			✓	✓	
Teacher Compensation			✓	✓	✓
Promotions		✓	✓	✓	✓

Source: SABER-Teachers data

Summary of Key Policy Options

Policy Goal and Levers

3. Preparing Teachers with Useful Training and Experience

Although recent reforms will incorporate teacher competencies and provide teaching practice, some policies are necessary .

- ➔ Serbia could elucidate the requirements for the opportunities for teacher candidates to acquire classroom experience.

4. Matching Teachers' Skills with Students' Needs

Policies do not exist to ensure sufficient quality teachers in hard-to-staff schools.

Emerging

- ➔ Serbia could formally identify hard-to-staff schools, monitor the overall supply of teachers in such schools, and provide incentives for teachers to enter and remain in those schools.
- ➔ Serbia could provide incentives to teachers of mathematics, foreign languages, and other shortage subjects such as higher pay, better promotion chances, or loan forgiveness.

5. Leading Teachers with Strong Principals

Principals must have teaching experience and specific coursework, but not practical administrative experience.

Emerging

- ➔ Serbia could develop a system for required internships or require experienced principals to serve as mentors of new principals.

8. Motivating Teachers to Perform

Serbia requires probation periods of new teachers, but does not use determine hiring or compensation based on performance.

Latent

- ➔ Serbia could institute formal reviews or some other means of assessing performance before extending contracts.
- ➔ Serbia could institute formal performance reviews that affect compensation.

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ⁱ In order to offer guidance to policy makers in client countries on how to raise education quality, the Education Unit at the World Bank's Human Development Department has launched Systems Approach for Better Education Results (SABER), an initiative that seeks to collect information about different education systems' policy domains, analyze it to identify common challenges and promising solutions, and make it widely available to inform countries' decisions on where and how to invest in order to improve education quality. SABER - Teachers is one such policy domain.

ⁱⁱ The focus of the initiative is the design of teacher policies as opposed to their implementation on the ground. A number of complementary activities will be looking at implementation in a sample of countries as this will involve a different methodological approach and will require more financial and human resources.

ⁱⁱⁱ For example, *SABER-Teachers* collects information on teacher organizations (as part of the policy area of "teacher representation and voice") and will make it publicly available. Yet no clear trend has emerged regarding whether (and if so, how) governments should engage with these organizations in policy formulation or consultation. To be sure, many studies have looked at the impact of unionization on schools' productivity (Argys and Reese, 1995; Eberts and Stone, 1986; and Hoxby 1996), student learning (Kingdon and Teal, 2008; Kleiner and Petree, 1988; Kurth, 1987; Register and Grimes, 1991; and Steelman et al, 2000), teachers' wages (Ballou and Podgursky, 2002; Baugh and Stone, 1982; Bee and Dolton, 1995; and Dolton and Robson, 1996), working conditions (Eberts, 1984; Murillo et al, 2002; and Zegarra and Ravina, 2003) and education policy (Goldschmidt and Stuart, 1986 and Woodbury, 1985). But even top-performing countries differ widely in how much they engage, to what extent they regulate, and how they organize teachers' unions. Data collected by *SABER-Teachers* will offer guidance on how to approach these issues in the future.