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# Implementation of the K–12 Education Reform in Qatar’s Schools

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Prepared for the Supreme Education Council



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# Summary

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## Background

In 2001, the Qatari leadership asked the RAND Corporation to undertake a broad-based examination of the nation's kindergarten through grade 12 (K–12) education system and propose a strategy for reform. This request was motivated by concerns that, in general, students were leaving Ministry of Education schools without the academic proficiency needed to pursue post-secondary education in Qatar or abroad and without the skills needed for many high-demand, high-skill jobs in the expanding economy. Building the capacity of each citizen would enable Qatari nationals to take charge of the country's rapid growth and replace the foreigners who fill many managerial and professional jobs because of the dearth of qualified Qataris.

## Designing and Implementing the Reform

After reviewing options presented by RAND, the Qatari leadership selected a system-wide structural reform plan that encouraged qualified persons with innovative ideas (including non-educators) to apply to run new government-funded schools, called Independent schools, under contracts with the government. The reform plan was based on four principles: autonomy, accountability, variety, and choice, as follows:

*Autonomy.* The Independent schools would operate autonomously, subject to conditions specified in a time-limited contract.

*Accountability.* The Independent schools would be held accountable to the government through two mechanisms. First, potential

operators would apply to open an Independent school and enter into a contractual arrangement. Second, each Independent school would be regularly evaluated through a number of measures, including standardized student assessments. Evaluation data would be made available to all stakeholders; these evaluations would inform parent school choice. Because funding was tied to enrollment, schools would be accountable to parents and students.

*Variety.* Each Independent school would be free to develop its own educational philosophy and operational plan, thereby promoting variety. The contracting authority could also provide incentives to ensure diversity.

*Choice.* Parents could use assessment data and other school information to choose the school that best fit their children’s needs. Competition for students would force all government-funded schools—traditional and Independent—to be more responsive to parents’ demands.

Embedded within the reform plan were the elements needed to support these principles:

- Publicly funded but independently operated new, innovative, and high-quality schools
- Systematic, objective monitoring and evaluation of school and student performance through standardized assessments in four subjects—Arabic, English, mathematics, and science
- Instruction and assessments built on internationally benchmarked curriculum standards
- A range of professional development opportunities for teachers and administrators.

Qatari leadership asked RAND to further develop this option and support the implementation of the reform, which became known as *Education for a New Era*. The institutions that would drive this structural reform were founded: the Supreme Education Council (SEC), which had general oversight responsibility; the Education Institute, which was charged with developing curriculum standards, chartering and overseeing the new Independent schools, and supporting school improvement; and the Evaluation Institute, whose mandate was to

develop assessments, collect data, and use those data to motivate the central reform goal of improved student performance.

The first generation of Independent schools, 12 in number, opened in 2004. By Fall 2006, 46 Independent schools were in operation alongside the Ministry of Education schools and private Arabic schools. New curriculum standards benchmarked to those of high-performing nations were guiding curriculum and pedagogy in the Independent schools, and the core components of the accountability system underlying the reform—national tests in four subjects aligned to the curriculum standards, national surveys of system stakeholders, and school report cards—were in place. Independent school teachers and administrators were taking advantage of new professional development opportunities available in their Independent schools and through the Education Institute.

### **Evaluating the Progress of the Reform**

In 2005, the SEC, in its role as overseer of the reform, asked RAND to monitor, evaluate, and report on the development and quality of the Independent schools. To examine the progress of these schools, the RAND team conducted observations in both Independent and Ministry school classrooms from Fall 2005 to Spring 2007. During these observations, we looked for evidence of student-centered classroom instruction; emphasis on student acquisition of analytic and critical thinking skills; implementation of curriculum standards in Arabic, mathematics, and science; use of English in mathematics and science classes; and support for teachers' professional development. We also examined employment patterns in Independent schools, parent support for and involvement in Independent schools, and the effects of policy changes that had occurred since the reform's inception.

### **Study Design, Methods, and Data Collection**

The study design featured two complementary approaches: a case study analysis of classroom- and school-level data from 16 schools (four Ministry schools, and 12 Independent schools representing different levels

of Independent school experience) to provide detailed process information, and an analysis of national survey and student performance data to evaluate system-wide trends and a key interim reform output—the academic performance of Independent school students relative to that of their Ministry school peers.

Members of the RAND study team made 104 visits to the schools in the sample, conducting 180 interviews with principals and administrators and 114 focus groups with teachers, students, and parents from November 2005 through May 2007. The study team also observed 204 classes to assess the degree to which Independent school classroom practices were student centered and consistent with reform goals. Curriculum experts in Arabic, mathematics, and science examined the implementation of the new curriculum standards and the use of English in mathematics and science classrooms.

In addition to visiting the schools, we analyzed teacher behavior and the attitudes of teachers, parents, students, and administrators using 2004–2006 national survey data from the Qatar National Education Data System (QNEDS) to compare school characteristics, teacher characteristics, and instructional practices in Independent and Ministry schools. We also analyzed Independent and Ministry school student performance data from the 2005–2006 Qatar Comprehensive Educational Assessment (QCEA), controlling for students’ academic achievement scores from the previous year’s exam (2004–2005).

The data on which our study findings were based were collected between 2004 and 2007. Since the RAND study team conducted no follow-up work after that time, this monograph covers only those early years of the reform’s implementation.

## **Key Findings**

Our findings indicate that the reform was working in its early years and that more progress was needed. We found, first, that the Independent schools were quite different from the Ministry schools in many ways and that, for the most part, principals, teachers, parents, and students recognized and appreciated those differences. Second,



there had been few changes in the Ministry schools during the reform's first years. Third, while reform institutions and components were in place, policy changes during the early years resulted in uncertainty and concern among stakeholders, potentially limiting the reform's future power. Finally, Independent school students outperformed their Ministry peers during the period studied.

### **Independent Schools Differed Markedly from Ministry Schools in Teacher Recruitment and Professional Development**

Independent schools were to be allowed more autonomy to direct teacher recruitment, hiring, and retention than were Ministry schools, where principals and teachers were assigned to their positions by the Ministry of Education. However, during the period studied, teaching-staff decisions in the Independent schools were increasingly constrained by the introduction of hiring targets calling for a minimum percentage of teachers to be Qataris. Moreover, teacher hiring and retention proved challenging for Independent schools because of how Qatari teachers perceived the working conditions in these schools relative to those in the Ministry schools—e.g., longer working hours, more-demanding work, and no job security.

Independent school teachers were more likely than their Ministry counterparts to report having engaged in professional development activities consistent with the reform's expectations: instructional methods, approaches to assessment, use of technology, strategies for teaching students with different abilities, curriculum planning, and the new Qatar curriculum standards.

### **The Move to a Standards-Based Curriculum Led to Both Difficulties and Rewards for Independent Schools**

A key component of Qatar's K–12 school reform was its stringent curriculum standards in four core subjects—Arabic, English, mathematics, and science—and expectations that Independent schools would develop standards-based curricula and instructional materials. The transition from the Ministry's entirely predetermined course of study to one that was to be selected or developed by principals and teachers was not easy. Teachers in the Independent schools raised concerns

about the extra workload required for curriculum development, particularly in the first year of a school’s operation; and some principals, teachers, and parents expressed a lack of confidence in the ability of teachers to perform this function. Nevertheless, Independent school teachers reported that they “often” used material developed *with* others in their school. The collaborative nature of curriculum development in Independent schools suggested that teachers were more-active participants in the learning process of their students. QNEDS data also indicated that Independent school teachers were much more satisfied with the physical environment and resources available in their schools than were Ministry teachers.

To mitigate the concerns of parents and others about the initial elimination of prescribed textbooks in Independent schools and the resulting reliance on teacher-developed curriculum and materials, the Education Institute provided Independent schools with a list of recommended textbooks that could form the basis for the curriculum. The new policy provided guidance but still encouraged Independent school teachers to seek variety and relevance in the instructional materials they used in their classrooms.

### **Independent Schools Were More Student Centered Than Were Ministry Schools**

In 2005–2006, classroom practices in Independent schools were more student centered than were those typical of Ministry schools, and Independent school teachers were more actively trying to engage students than were Ministry teachers. Our analysis indicated that Independent school teachers were also demanding more of their students in terms of thinking skills, a crucial goal of the reform.

Independent school teachers reported using new student-centered pedagogical approaches more often than did Ministry teachers, which was not surprising given that Independent school teachers were receiving more professional development than were their Ministry counterparts. Independent school teachers were clearly working hard to implement the new curriculum standards. However, while the content was being conveyed, demands for higher-order thinking were still relatively limited. Materials that teachers were selecting and developing were

sometimes inadequate and were not always completely aligned with the curriculum standards. Use of English in mathematics and science classes was uneven because of the lack of English proficiency among teachers and students.

### **Students and Parents Demonstrated a Higher Level of Satisfaction with Independent Schools Than with Ministry Schools**

During these early years of the reform, Independent school students were happier with, more interested in, and more satisfied with their school than were Ministry students. Independent school teachers reported that their students were more motivated to learn, and attributed this to better facilities (particularly the availability of computers), more-active learning, and the fact that Independent school teachers had more autonomy and exerted more effort to engage their students. Compared with Ministry school students, Independent school students reported that they were proud of their school more often and were more satisfied with what it offered. Finally, Independent school parents were more involved in and were generally more satisfied with their children's school than were Ministry parents.

### **There Was Little Evidence of Change in Ministry Schools**

Ministry schools were not expected to make significant changes in the short term because they had few incentives to alter long-established patterns. For example, an important incentive for system change—parents' ability to exercise school choice—could not come into play until more Independent schools were established. In addition, the Ministry system's highly centralized nature made change of any sort at the classroom level difficult to achieve. Further, the motivation to initiate immediate changes was reduced when the SEC directed that all Ministry schools would participate in a phased conversion to Independent school status.

While some Ministry teachers were taking advantage of professional development options in the reform and were familiar with the new standards, most reported that they rarely implemented what they had learned in their classrooms. Classroom practice data from the Min-

istry schools in the sample indicated little to no movement from the teacher-centered, traditional practices that typified Ministry schools.

### **Frequent Policy Changes Negatively Affected the Reform Effort**

In response to concerns that arose as implementation of the reform began, the SEC revised many policies during the reform’s first years. The large number of changes over a short period fostered a sense of instability among some Independent school administrators, who grew increasingly reluctant to attempt innovations, especially those that involved an element of risk. Moreover, some of the changes, such as a Qatarization policy that set quotas for the percentage of Qataris employed in specific sectors, including Independent schools, imposed constraints on Independent school operators. One new requirement, that all Independent school operators be Qatari, be qualified principals, and serve as principal in their school, threatened to reduce school variety. Another decision, this one to limit the involvement of school support organizations (SSOs)—cadres of international experts who worked daily to build capacity in a single Independent school—to one year of support, left some Independent schools inadequately prepared to carry out the many tasks that the reform demanded.

### **Independent School Students Generally Outperformed Ministry School Students, But Overall Achievement Was Low**

Standardized testing of students and publicly reported school-level results were key elements of the reform design. Because of data limitations, RAND’s detailed analyses of student achievement included only students in grades 4, 5, and 6. Our results indicated that students in Independent schools outperformed students in Ministry and private Arabic schools in both Arabic and English. Independent school students assessed in Arabic also outperformed Ministry school students in mathematics and science, although Independent school students assessed in English tended to receive lower mathematics and science scores than did their Ministry peers. However, better Independent school student performance must be viewed against what were generally low levels of academic achievement among all students.

## Key Recommendations

Overall, the *Education for a New Era* reform achieved important successes in its early years. The Independent schools showed clear progress in applying new student-centered curricula and teaching methods. Early test score data indicated better student outcomes for Independent schools compared with Ministry schools. To build on these successes, the Qatari leadership needs to address concerns identified in this study.

### Limit Policy Changes

For such a young reform, the number of policy changes that directly affected the Independent schools was substantial. While many of these changes responded to issues that arose during implementation of the reform, they nonetheless contributed to a climate of uncertainty that sometimes deleteriously affected both motivation and innovation. RAND therefore recommends that policy changes be limited as much as possible. When new rules, regulations, and other policy changes are necessary, we advise that careful consideration be given—in advance of their implementation—to how they are likely to affect current practice and system performance. Although conflicts between and among goals cannot always be eliminated, the articulation of inherent tensions can be helpful.

### Increase Support for Schools and Teachers

Independent schools need help in identifying materials that support standards as well as ideas for encouraging more-innovative use of surplus funds. Teachers need help in translating standards into practice. One way to do this is to retain SSOs in new Independent schools beyond one year. Another way might be to develop and institute incentives to keep highly competent and experienced teachers in Independent school classrooms rather than rewarding them with administrative positions, which is a Ministry school policy that many teachers have come to expect. Developing programs to help teachers improve their English-language proficiency would be highly beneficial. And as part of the larger picture, attention should be devoted to raising the overall

status of teaching. Such innovative measures as flexible schedules and job sharing might make the profession more attractive, particularly to teachers with families.

### **Review Student-Assessment Policies, Particularly Those Related to the Use of English as the Language of Instruction and Testing**

Even though Independent school students were achieving at higher levels than their Ministry school counterparts, there are issues with the QCEA system that deserve attention. The language of assessment proved to be a major contributor to student performance: Independent school students whose mathematics and science skills were assessed in English tended to perform worse than Ministry school students whose skills were tested in Arabic. While the Independent school students were allegedly being instructed in the English language, they may not have been sufficiently proficient in English to understand the classroom instruction or the assessment questions or to express themselves well in English. The findings from our analysis suggest that policies on language of assessment that link language of assessment to language of instruction need review. We also recommend that all students continue to undergo QCEA assessments. Finally, as a way to increase performance motivation, we recommend that the QCEA be revised so that performance has consequences for individual students.

### **Adopt Approaches That Encourage Parents to Support High-Quality Education for Their Children**

Part of Qatar’s school-reform initiative focuses on helping parents make informed choices about which schools will best serve their children’s needs. Developing a composite index that ranks schools according to student performance and other valued outcomes would inform parent decisionmaking and inspire healthy competition among Independent schools. Also, rewards could be developed for Independent schools that promote the parent engagement strategies outlined in each school’s operating agreement. Finally, workshops for parents could introduce new curricula, present strategies for helping their children succeed academically, and aid them in understanding school report cards.

Qatar's reform has shown significant early success, and its huge potential for offering Qatar's children a world-class education has not abated. But to realize that potential, policymakers would do well to address the challenges identified in our study and to work to improve the functioning of the nation's teachers and schools. The areas highlighted in this monograph are intended to more firmly establish the reform on a positive course for future growth and development.