



Extract from the report to the  
Public Accounts Committee on  
the development of the national tests

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# I. Introduction and results

1. National tests represent a new approach to measurement of pupil performance in primary school. As from 2010, the test system becomes compulsory for a number of subjects, like for instance Danish and mathematics during the nine years of compulsory schooling. The tests are taken over the internet and are adaptive, i. e. the test program adapts to match each pupil's ability. When a pupil is providing correct answers to the questions several times in a row, the test program will automatically start asking more difficult questions, whereas incorrect answers will result in easier questions. The test system is self-scoring and provides the test results of the individual pupil automatically. The national tests will become a supplement to the international PISA system.

2. After two rounds of tendering, the Ministry of Education made an agreement with a private supplier on 30 June 2006 to develop the national tests. The initial three compulsory national tests were launched on 1 May 2007 as scheduled, but subsequently they turned out to be lacking in quality and variation. The test results could therefore not, as assumed, be used to measure the pupils' performance on a nation-wide basis. The remaining seven compulsory tests, which should have been ready in April 2008, were then postponed. Since then the tests have not been used as compulsory tests. This means that the ten tests will have been delayed by respectively two and three years when they are launched in the spring of 2010.

3. DKK 110.8 million was appropriated for the project in Document No 191 1/6 2006.

4. In February 2009, the Public Accounts Committee asked Rigsrevisionen to examine the national tests on the grounds that the project had turned out to be more difficult and labour-intensive than expected.

5. The objective of the examination is to assess the Ministry of Education's planning and management of the national tests, and whether the national tests will be finished within the current time schedule and budget, and with the required content. The examination has not included the role of the supplier.

6. The report answers the following questions:

- Has the Ministry of Education's planning of the project prior to contract signing been adequate?
- Has the Ministry of Education taken into consideration the risks that could impact the content, timing and economy of the project?
- Do the national tests meet the requirements relating to content, timing and economy?
- Has the information provided by the Ministry of Education to the Folketing (parliament) from February 2005 to the end of 2009 presented fairly the status of the project?

## The foundation stone of the project

The concept of national testing was introduced in the Government Platform from 2005.

National testing was implemented with the adoption of a bill on amendment of the Folkeskole Act (act on compulsory education) presented on 7 December 2005 (L 101).

## The ten compulsory tests

- Danish in the 2nd, 4th, 6th and 8th grade
- Mathematics in the 3rd and 6th grades
- English in 7th grade
- Natural Science in the 8th grade.

In addition, pupils in the 5th and 7th grades may take two voluntary tests in Danish as second language.

## RESULTS AND MAIN FINDINGS

After a delay of several years, the national tests will be launched in February 2010 and will include test questions that meet the requirements of the bill.

Overall, the Ministry of Education's management of the national test has been good. Rigsrevisionen has established that the supplier throughout the project has failed to deliver as agreed. However, the implementation of the project would have been facilitated if the project had been prepared more adequately by the Ministry of Education.

The Ministry of Education started using the tests in 2007. But it later turned out that the tests did not meet the requirements for quality set by the Ministry. The Ministry has since made the quality of the tests a priority and has become more involved in the quality assurance of the tests than planned.

The project is expected to keep the budget of DKK 110.8 million, cf. Document No 191 1/6 2006.

This overall assessment is based on the following factors:

**The Ministry of Education's preparation of the national test project could have been more adequate. The financial framework of the project was determined on the basis of inadequate evidence, the time schedule was very tight, and the Ministry did not, when planning the project, take into consideration that the number of suppliers in the market was limited. The Ministry did specify clear objectives for the tests, but did not consider the risks that could be associated with the actual construction of the tests.**

### *First round of tendering*

- With the Government Platform from 2005 as a starting point, the Ministry of Education defined a very tight time schedule for the development of the national tests, which jeopardized the timely implementation and quality of the project.
- The Ministry did not work out any financial analyses to provide a basis for the estimate of expenditure in spite of the fact that the Ministry was not certain that sufficient funds had been allocated to the project.
- The Ministry had defined clear objectives for the finished tests.
- The Ministry should have considered splitting the project into independent sections that could be put up for tender separately, rather than invite tenders for the entire project.
- During the tendering phase, the Ministry worked out risk analyses that addressed timing, economy, content and choice of supplier. In order to minimize the risks identified, the Ministry decided to close the first round of tendering without awarding the contract.

### *Second round of tendering*

- The Ministry of Education did also during the second round of tendering worked out risk analyses that were addressing time, economy, content and choice of supplier.
- The time schedule was very tight and posed a high risk for the project.
- The Ministry did not prepare any financial analyses, which could support the decision to fix the grant at DKK 110.8 million in Document No 191. The Ministry based its estimate of the expenditure on the information provided by the participants in the first round of tendering and included a buffer of DKK 20 million in Document No 191 in an effort to minimize the risk of overrunning the budget.
- The Ministry did not re-consider the construction of the tender procedure, despite the fact that the first round of tendering had only resulted in one suitable tender. The Ministry should also in connection with the second round of tendering have considered splitting the project into separate tender phases, which should each be completed before the next phase could be started, i.e. an independent pilot phase. This would have reduced the risk level of the project and thereby made it more attractive for the suppliers to submit offers.
- The Ministry drew up the tender material in a manner that allowed the suppliers to compromise on most of the detailed requirements of the Ministry. This approach was chosen by the Ministry to reduce the risk that the timing and financial framework of the project would discourage suitable suppliers from submitting tenders.
- The Ministry tried to safeguard the quality of the test by listing several quality requirements in the tender material. However, the Ministry did not take into consideration the risks that could be associated with the concrete construction of the tests within the selected subjects.
- The Ministry was aware that entering into a contract with the supplier in June 2006 did jeopardize the quality of the test content. The Ministry tried to counter this risk by including, for instance milestones triggering penalty payments, and additional guidance of the supplier in the initial stages of the project.

**The Ministry of Education has during the contract phase continuously assessed the risks associated with the content, timing and economy of the project, and has to a wide extent acted on the risks identified. The Ministry has used a variety of management tools to manage the project. The Ministry has increased the quality requirements with respect to the test questions and has accepted co-responsibility for exceeding the time schedule.**

- In the contract phase, the Ministry of Education has continuously worked out risk analyses addressing content, timing and economy. The Ministry has used the results of the analyses in its dialogue with and management of the supplier, and internally in the Ministry.

- In May 2007, the Ministry launched the national tests according to schedule. However, the test questions did not cover all subject areas and the subsequent evaluation showed that the tests were lacking in quality. The test results could therefore not be used to create a nation-wide result. Since then, the tests have been postponed three times.
- Rigsrevisionen has established that the supplier has exceeded the milestones of the project on several occasions and has had difficulties delivering the test questions for the national tests as stipulated in the contract.
- Prior to the testing in May 2007, the Ministry's management of the project was based on dialogue, support and close monitoring of the milestones in the contract. The Ministry was focused on the contractual division of labour and the timing of the project and therefore failed to adjust the framework of the project in spite of the uncertainty concerning the quality of the test questions.
- In May 2007, after the test had been implemented, the Ministry focused on ensuring that the national tests would achieve the intended purpose of being a useful tool for the assessment of pupil performance. The Ministry became more directly involved in the project and expanded its management repertoire to include sanctions (penalties), incentives (opportunity to recoup penalties paid, if any) and increased control. As a result, expenditure for external advice increased heavily.
- In the summer of 2008, the Ministry entered into a settlement with the supplier and accepted part of the additional costs borne by the supplier for development of test questions. Thereby, the Ministry acknowledged that the requirements concerning the tests had been tightened compared with the original requirements specification, and the Ministry accepted co-responsibility for the prolonging of the project.
- The Ministry has not from the beginning allocated the resources necessary to manage a project of this size and complexity. However, this shortfall was remedied in the spring of 2007 when the Ministry reorganised the resources involved in the management of the project.

**According to the most recent time schedule, the national tests are to be launched as nation-wide compulsory tests in February 2010. The Ministry of Education is expecting the tests to meet the requirements of the contract with respect to the content of the tests. The Ministry is expecting to keep the budget in spite of the project delay.**

- According to the Ministry of Education, the ten compulsory tests will be ready for use from February to late April 2010, which means that the tests are implemented as indicated in the time schedule contained in Document No 35 18/12 2008.
- Whether the requirements of the contract with respect to the size of the test item bank (pool of test questions) are met at the time of testing is uncertain. Neither is it clear whether the voluntary tests in Danish as a second language will be ready when the milestone expires on 30 April 2010. The tests have been available since the autumn 2009, but it has been voluntary for the schools to use them. In the opinion of the Ministry they have functioned with the number of test questions available.

- The Ministry is expecting to keep the entire national test project within the budget of DKK 110.8 million as indicated in Document No 191 in spite of the fact that the appropriation period has been extended by seven months.
- Compared to the Ministry's budget from 2006, the shifts in expenditure related to the project have been significant. Development and quality assurance of the tests turned out to be more cost consuming than anticipated, and the Ministry's need for IT support has also exceeded plan. On the other hand, the Ministry has purchased fewer extra services from the supplier than anticipated, and has, for instance, not purchased any supplementing test packages.
- Total project expenditure will exceed DKK 110.8 million if the following factors are taken into account; the Ministry's internal expenditure of DKK 16 million during the contract period, the indirect costs related to the delay of the project resulting in two years' running of the test system, and loss of class hours due to additional testing of the national test. In return, the quality of the tests has been enhanced in certain areas, according to the Ministry.

**The information provided by the Ministry of Education to the Folketing in the period February 2005 to the end of 2009 has been correct and presented fairly the status of the project.**

- The information provided by the Ministry of Education to the Folketing from February 2005 to the end of 2009 on the development of the project has been correct and has, as it should, included updates on all significant factors.