

# > INHOLLAND

## University improves exam development and testing process

### Situation

INHOLLAND is a network of universities in the Netherlands that offers students an education in a diverse array of subjects, including economics, health care, art, pedagogy, and sociology. Currently there are 40,000 INHOLLAND students.

### Critical issue

INHOLLAND instructors spent too much time and effort typing and grading written student exams. Often, students did not completely fill in answers to test questions, creating numerous errors. As a result, teachers had to manually enter students' answers and re-grade the tests.

To address these issues, INHOLLAND's teachers recognized they needed a solution that could accurately grade a large number of student exams while minimizing errors. The teachers also wanted to compile and analyze exam results to improve the quality and effectiveness of the tests. For example, if a majority of students consistently answered a certain question incorrectly, one could conclude that the question itself was at fault.

### Solution

INHOLLAND used Dimensions, SPSS Inc.'s market research software suite, to process and analyze exams. Teachers used mrPaper to create a question database from which they selected exam questions. They then used mrScan to grade the tests. Test results were compiled and analyzed in order to develop better tests.

### Results

- Provided more reliable and accurate test evaluation data
- Created a database of questions for developing new exams

### Company

INHOLLAND

Country: Netherlands

Industry: Higher Education

Founded: 2003

Company Type: Public

Employees: 3,000

Students: 40,000

### Application

Electronic test processing

### Products

SPSS Dimensions™ (mrPaper, mrScan)



INHOLLAND, based in the Netherlands, was formed on January 1, 2003, through a merger between five universities. INHOLLAND has branches in Alkmaar, Delft, The Hague, Diemen, Haarlem, and Rotterdam. By offering a comprehensive curriculum in economics, healthcare, art, pedagogy, and sociology, INHOLLAND maintains an enrollment of more than 40,000 students. More than one-fourth of these students attend INHOLLAND Diemen.

Like most schools, INHOLLAND Diemen uses exams to assess mastery of course content. A typical exam given in the Health and Welfare division of INHOLLAND Diemen required students to fill in a circle that corresponded to an answer. Often, students wouldn't fill in the circle completely and the computer would mark the answer as incorrect. Teachers would then review the test, manually enter those answers, and re-grade the test.

Instructors were also unable to draw conclusions, such as overall student performance and frequently missed questions, from completed exam. And the time spent correcting exams kept the teachers from other activities such as preparing lessons. "Our teachers were spending more time grading exams than actually teaching the material," says Marc Scheunhage, ICT Project Manager at INHOLLAND Diemen.

In order to reduce the time and effort spent processing tests, INHOLLAND realized it needed a software package that could write exams and grade them electronically. Marc Scheunhage selected a solution comprised of mrPaper and mrScan. mrPaper eliminated the manual process of setting up the exams, while mrScan made it possible to grade tests using scanning technology instead of manual data entry.

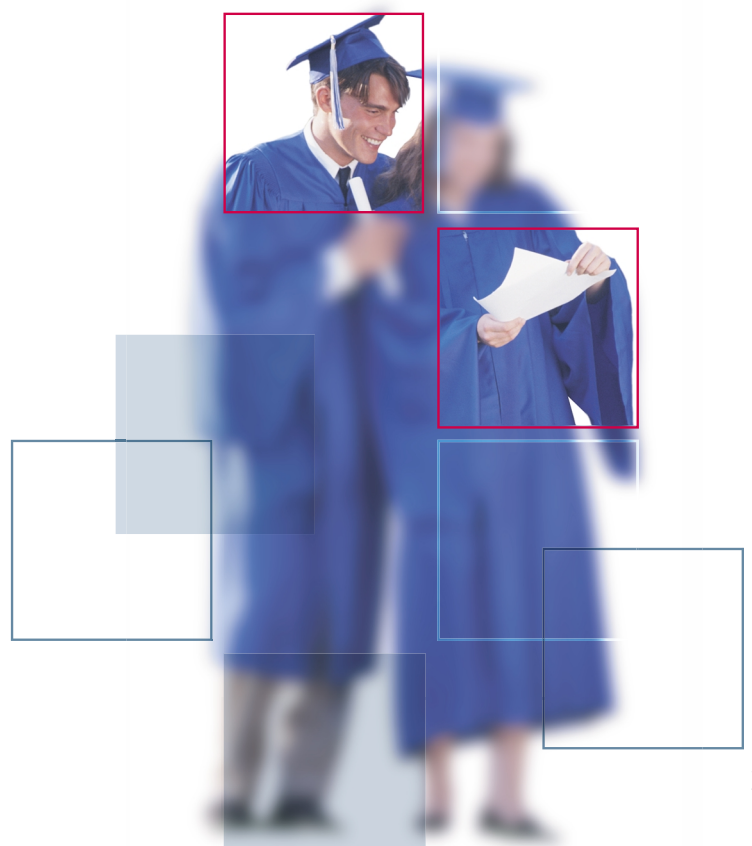
**Provided more reliable and accurate test evaluation data**

With mrPaper and mrScan, teachers have spent far less time grading exams and correcting errors. In addition to saving time, the software enables teachers to gain important insights into the exams, including frequently missed questions and trends in student performance. Teachers then use this data to develop better exams.

"With our previous software, the answers that were not completely and clearly entered had to be corrected manually. With Dimensions, human error is no longer a factor. In addition, our teachers no longer have to type the tests, which saves them a lot of work and frustration," says Scheunhage.

□ "With our previous software, the answers that were not completely and clearly entered had to be corrected manually. With Dimensions, human error is no longer a factor. In addition, our teachers no longer have to type the tests, which saves them a lot of work and frustration."

– Marc Scheunhage  
ICT Project Manager  
INHOLLAND



**Created a database of questions for developing new exams**

Using mrPaper, Scheunhage has compiled a database of questions. This database allows teachers to access questions used for previous exams. In the future, a centralized office for grading exams from multiple departments or universities, known as a “scanning bureau,” could be established to use the software to meet a wider range of educational needs, such as grading large quantities of exams.

“A question database like the one we’ve created might be used to compile all kinds of data on student performance, making evaluations of exams more accurate and meaningful,” said Scheunhage. The new version of mrPaper, which is compatible for Microsoft® Windows® XP, has made the testing system available for all students at INHOLLAND.

According to Scheunhage, “Other disciplines can also benefit from the use of Dimensions. The speed and accuracy of the system, the preparation of a question database, and other advantages make it a valuable tool for any educational institution.”

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As part of the school’s mission, INHOLLAND expects that its employees “are ambitious, and have an open, market-oriented attitude, and are focused on discovering and realizing opportunities. In principle, we answer a request from society with ‘yes.’”

By leveraging Dimensions, INHOLLAND has said, “yes” to significantly improving its testing system and is now ahead of the curve. Professors spend less time on paperwork and more time working with students to educate and prepare them for exams, satisfying yet another part of the school’s mission, which is to ensure that its students can develop their talents to their full potential.

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