

ABBYY FormReader 6.5 Is Used for National Educational Tests Processing in Chile

Since the year 1988 Chile annually conducts the series of unified tests developed by national educational assessment system. This public initiative which is called the Sistema de Medición de la Calidad de la Educación or SIMCE (Education Quality Measurement System) was specially designed to obtain valid information about the real level of national education, to conduct an impartial evaluation of elementary school performance and define the guideline for improving public school services.

SIMCE assesses the progress of the students of 4th and 8th grades in language, mathematics, history, geography, and national science. Along with valuation tests it involves a set of questionnaires completed by parents and teachers raising their feedback and, therefore, considering social external factors. These forms are primarily aimed at collection of socioeconomic and environmental information about the students, their families, peers and schools.

As a whole, SIMCE enables Chilean educators to obtain a comprehensive view of students' achievements, analyze and compare their performance both at school and national levels

But before making any kind of investigation all the forms should be processed to provide the necessary data in editable and analyzable format. The Government needs to collect all received forms (a huge volume of paper documents mainly filled out by hand), scan and recognize them before the processing starts.

For the year 2008 the following data was estimated:

SIMCE - 4th grade numbers

- 8.018 schools
- 258.765 students
- 3 tests (each has 4 different forms)

SIMCE – 8th grade numbers

- 2.454 schools
- 265.962 students
- 2 tests (each had 2 different forms)



About Dimacofi S.A.

Dimacofi, company established in 1927, is a pioneer in the development of technological solutions for the companies.

During 85 years Dimacofi accompanies development of the industry of copying, printing and integral administration of the documents. Specialists of the company have created solutions for specific business areas which conform to different market needs and requirements: from the equipment of the companies, integral solutions of printing and reproduction up to advertising graphical printing.

As Dimacofi is immersed into the competitive market of high technologies, company is forced to renew the solutions permanently, maintaining the standard of innovation and vanguard in creation of solutions based on different products and services and its' consolidation.

For more information visit www.dimacofi.cl

Furthermore, the forms completed by teachers (for each subject) and parents should be added to the figures stated above. Consequently, the total amount of forms to be processed by SIMCE has come up to almost 14.000.000.

To complete all the work within the reasonable time, the Government divides the project into several parts and distributes them among the document management companies. Dimacofi, a software producer specializing in copying, printing and document management tasks, has been participating in SIMCE processing for 3 years. It offers the specially chosen solution of Soluciones Web Y Portales Ltda based on award-winning ABBYY FormReader 6.5 software bundled with scanner to replace manual data-entry with an automatic capture of the information from the questionnaires.

Project

For the time being Dimacofi takes up a small-scale part of SIMCE project. Nevertheless 300.000 pages processed during the year 2008 provided the company with sufficient experience which supplied a reliable background for further work in the field of data capture solutions. In future Dimacofi is planning to expand its participation in the project and to bid for greater parts of SIMCE.

Despite the relatively small number of pages to be processed, the project required designing of 30 kinds of forms and creation of 50 different templates. Dimacofi had 30 days in total to come up with all tasks because the results had to be ready within 1 month since forms are received. In order to complete the project successfully they performed the process around the clock in 3 working groups. A robust and highly accurate solution of Dimacofi based on rented hardware, HP servers and Dell PC's (for scanning and verification needs) and data capture software. After the comprehensive research of the market of document processing software, ABBYY FormReader 6.5 was chosen and became a cornerstone of the project. It combines the powerful capabilities of design, creation, validation, and verification of any form types. The key point for Dimacofi was the product's highest accuracy which demanded minimal human involvement and allowed to complete the process within the given time limits.

Here are the examples of different form types needed to be processed:



SWYP Ltda.

About Soluciones Web Y Portales Ltda. (SWYP Ltda.)

SWYP Ltda. was created to render services and assistance in the field of software solutions, web, websites, and online software to corporations, companies and public services. The principal object of the company is to maximize the availability and use of internet and software in the country by offering optimal solutions of the highest quality. SWYP Ltda. offers its assistance for the development of Internet and Intranet applications and services, such as: design, configuration selection, software development, engineering, webhosting, positioning, web design etc.

SWYP Ltda. is the country partner of ABBYY in Chile and one of centers of competence of ABBYY technologies in South America.

For more information visit www.cwyp.cl

Form 20: ¿Con qué frecuencia emplea las siguientes estrategias de evaluación con los alumnos de este curso? (Seleccione una opción en una sola alternativa en cada ítem)

	Siempre	Frecuente	Algunas veces	Rara vez	Nunca
1. Aplicación de cuestionarios o pruebas escritas en aula, al inicio de cada unidad de aprendizaje.					
2. Aplicación de cuestionarios o pruebas escritas en aula, al final de cada unidad de aprendizaje.					
3. Aplicación de cuestionarios o pruebas escritas en aula, durante el desarrollo de cada unidad de aprendizaje.					
4. Aplicación de pruebas escritas con ítems, al término de cada unidad de aprendizaje.					
5. Aplicación de pruebas escritas con ítems, al término de cada periodo académico (semestre o trimestre).					
6. Aplicación de exámenes (pruebas de nivel) al término del año escolar.					
7. Aplicación de partes de exámenes, cuestionarios y/o tests desarrollados en aula o en casa.					
8. Comparación con los alumnos de sus propios y otros tests realizados en las pruebas.					
9. Utilización de los resultados de los exámenes para aplicar a los alumnos con mayor dificultad.					
10. Utilización de los resultados de los exámenes para modificar la planificación de clases, la metodología de enseñanza o la organización del aula.					

21. Señale, según su opinión, si está de acuerdo o en desacuerdo con las siguientes afirmaciones

En este aspecto...

	De acuerdo	En desacuerdo
A. Existen claramente evidencias del proceso de construcción.		
B. El docente favorece claramente aquellos que son de influencia externa.		
C. Se valoran al profesor que se esfuerza por mejorar la práctica docente.		
D. Existe un alto nivel de exigencia académica.		
E. Hay criterios claros respecto a la participación de los padres.		
F. Los fines y prioridades están claramente definidos.		
G. El orden tiene un lugar en los logros académicos.		

22. ¿Cuál de las siguientes instituciones de trabajo en equipo trabajan en su establecimiento?

	Si	No
A. Oficina profesional de trabajo (OPP)		
B. Oficina de gestión escolar (OGE)		
C. Consejo de profesores		
D. Centro de Padres		
E. Consejo Escolar		
F. Oficina de trabajo con niños, desarrollo o centro de aprendizaje		
G. Oficina de trabajo en forma de algún programa o proyecto innovador, según considere el usuario		

Form 21: ¿Cuántas horas cronológicas, en promedio, dedica semanalmente a la preparación de clases? (Seleccione un número cronológico, en horas, minutos, segundos y décimas de minutos, en la columna de horas, minutos al grupo y a la columna de segundos)

22. En este establecimiento, ¿cuántas horas dedicadas, como docente, a preparar clases?

0. Ninguna hora cronológica (0 minutos, segundos)

1. No

23. ¿Trabaja también en algún establecimiento más?

0. No (no para cada alternativa)

1. Sí, con un total de... horas cronológicas (0 minutos y segundos)

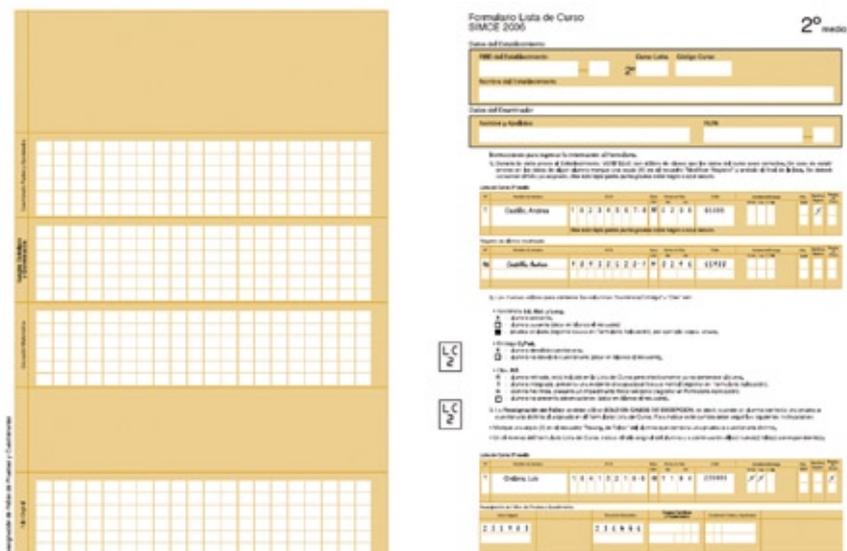
2. No

24. Necesito un espacio que en tiempo de clases se utilice y que se pretenda que no haya posible alterar todos los contenidos curriculares, que permita que sea posible de que pueda ser utilizado en algunas actividades de Lengua Castellana y Comunicación en 2º Medio. (Seleccione una opción en una alternativa en cada ítem)

	Siempre	Frecuente	Algunas veces	Rara vez	Nunca
1. Espacios educativos, talleres y actividades fuera del aula.					
2. Espacios de recursos educativos, a nivel escolar o sala.					
3. Instalación permanente en algunos tipos de aulas especiales y situaciones curriculares.					
4. Tipo de espacio físico creado por el docente.					
5. Tipo de espacio físico creado en los niveles de comunicación.					
6. Cambio de ambiente y/o estructura en los tipos de aula.					
7. Cambio de ambiente y/o estructura de los espacios físicos.					
8. Instalación permanente y/o cambio de aula o taller.					
9. Organización del tiempo entregado por medios físicos de comunicación.					
10. Organización de aula o espacio en los medios de comunicación escrita.					
11. Organización de aula o espacio en los medios de comunicación gráfica.					
12. Recursos escritos y/o gráficos en los medios de comunicación escrita.					
13. Organización de aula o espacio en los medios de comunicación gráfica.					
14. Organización de aula o espacio en los medios de comunicación gráfica.					
15. Organización de aula o espacio en los medios de comunicación gráfica.					
16. Organización de aula o espacio en los medios de comunicación gráfica.					
17. Organización de aula o espacio en los medios de comunicación gráfica.					

The teachers also had to complete the list of the students that took the test.

The form looks like this:



Real examples of the forms are private property of the Government of Chile

Process

The ready-to-use solution of SWYP Ltda provided the entire set of required tools for automated data capture fully integrated with general workflow.

The configuration used in the project was as follows:

- 1 FormReader 6.5 Basic Kit
- 1 additional recognition station
- 2 additional scanning stations
- 2 additional verification stations

Three working units were involved in the process. Each person in the group was responsible for a specific task in the general workflow avoiding the intersection of competences. And each team had the similar structure: 5-6 sorting/scanning operators, 4 verification operators and one supervisor.

The project required 2 scanning stations, 2 recognition stations, 4 verification/correction and 1 administration/export stations. There were two main project definition phases:

Scanning



Recognition



Administration/
Export



- 1) At first the documents were taken from their envelopes and scanned. This task required from 5 to 6 employees.
- 2) Next stage was provided by ABBYY software workflow – data was processed sequentially: scanning, recognition, verification, correction and export. Once extracted from the forms data was fully recognized and automatically exported to central repository. Outstanding OCR/ICR and data capture technologies for high-quality text recognition and data extraction allowed to avoid usual errors connected with manual data entry.

Results

Dimacofi has been successfully cooperating with SIMCE for the last 3 years and received very positive feedback from the Government. Data capture solution provided by ABBYY FormReader 6.5 sped up customer's business processes, eliminated manual data entry and significantly reduced implementation and maintenance costs. The Government had received a scalable, reliable and transparent assessment system of national education in Chile.

As the state contract goes on for 3-4 years, Dimacofi previously had to wait for the chance to bid on the greater contract to process SIMCE documents. Now when the 'training stage' is successfully passed they will have this long-expected opportunity.

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