

CASE STUDY: GREYSTONE SOLUTIONS CREATES DATA COLLECTION SYSTEM FOR 32° MASONIC LEARNING CENTERS



Using Microsoft® Visual Studio .NET, Microsoft® SQL Server and Microsoft® Reporting Services, Greystone Solutions built the DCS (Data Collection System) for the 32° Masonic Learning Centers for Children, a not-for-profit organization that has tutored thousands of students with dyslexia in 52 facilities across 15 states. A secure web-based portal, DCS allows the Masonic Learning Centers for Children to track and assess a wide variety of data related to the screening, teaching and testing of students, in turn providing that data in a usable format to leading dyslexia researchers.

Situation

For more than a decade, the Scottish Rite Masons, Northern Jurisdiction, have been national leaders in the effort to help children and their families overcome the painful obstacles of dyslexia. At 52 Learning Centers in 15 states, the Masonic Learning Centers for Children tackle the challenge of dyslexia head-on, both by providing free tutoring for children with dyslexia and by training a growing cadre of highly skilled and dedicated tutors.

At one time, managing the Centers was primarily a manual effort: each Center operated on its own, tracking information on paper and within its own localized, disparate software systems.

“As our program continued to grow, so did the paper trail to track children, centers and teachers,” said Joseph J. Berlandi, Esq., Executive Director, Masonic Learning Centers for Children. “It was extremely time-consuming to tally big picture data, if it happened at all. Many of our donors give \$5000 each year to support every child being tutored. We take very seriously our responsibility as stewards of such generous gifts. We couldn’t settle for anecdotal evidence that our programs were really helping children.”

The range of data that needed to be tracked was staggering: each Center receives dozens – in some cases hundreds -- of paper applications from potential students each year. Centers assess each application in order to determine if the program’s teaching method, called the Orton-Gillingham approach, is an appropriate fit. Whether or not the child is accepted in the program, data about each applicant must be maintained and analyzed.

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Solution Overview

Customer Profile

For more than a decade, the 32° Masonic Learning Centers for Children has tutored thousands of children with dyslexia in 52 facilities across 15 states.

Service Offerings

Portals, Business Intelligence

Industry

Not-for-Profit, Education, Research

Challenge

A system was needed to collect, analyze and manage many aspects of running the 32° Masonic Learning Centers for Children, including training tutors, managing learning spaces, as well as screening, tutoring and testing students.

Solution

The Centers hired Greystone Solutions to build the DCS.

Microsoft Software Used

- Microsoft® Visual Studio .NET
- Microsoft® SQL Server
- Microsoft® Reporting Server

Benefits

- Centralized data repository increases efficiency, accuracy and reliability
- Web-based interface is easy to use
- Flexible architecture built to expand with program
- Robust system enables world’s largest collection of research data on children with dyslexia



MASONIC LEARNING CENTERS CASE STUDY CONTINUED



At the same time, each Center recruits and trains tutors, a rigorous certification process that must also be tracked and assessed in order to ensure a steady stream of qualified tutors.

Once tutoring begins, the amount of information to be managed does not end. Tutoring lasts 2-3 years on average, with each child being given standardized tests on an annual basis. Tracking and analyzing this data is crucial to the program as it proves the efficacy of the Centers.

"Some years ago, we created a database prototype to manage and analyze program information," says David C. Winters, Ph.D. Executive Director of Clinical Affairs, Masonic Learning Centers for Children. "Although our test system proved that automation was the right answer, it quickly became clear that we needed outside help to create a robust and scalable solution."

Solution

The Masonic Learning Centers for Children now sought the right partner to help build their new application. After receiving a series of competitive bids, they selected Greystone Solutions.

"We chose Greystone because they spent the time to truly understand what we wanted out of the system," says Winters. "It's not easy to build a solution of this magnitude, and Greystone's professionalism was crucial to our success."

Having chosen Greystone, the first task was to set the system's scope and requirements. This was no simple task, considering the number of user groups whose needs had to be considered.

"We decided to create two review committees to help us set system parameters," explained Berlandi. "The first, called the Data Collection System Committee, included administrative and IT staff as well as several Center Directors and researchers. The second, called the Peer Review Committee, was established with top researchers in the field of dyslexia. These professionals gave us information on the kind of data they would like to track, and what format would be most useful."

After the requirements were defined, the Masonic Learning Centers for Children and Greystone worked together to develop the new DCS (Data Collection System.)

"We wanted to build a system that would be simple, scalable and functional," says Peter Barrera, Vice President of Client Services for Greystone Solutions. "Therefore we chose to build the DCS with Visual Studio .NET, Microsoft SQL Server and Microsoft Reporting Services."

After four months of development, the new DCS system was launched. From the start, the solution was able to automate and organize information across many different locations and user groups.

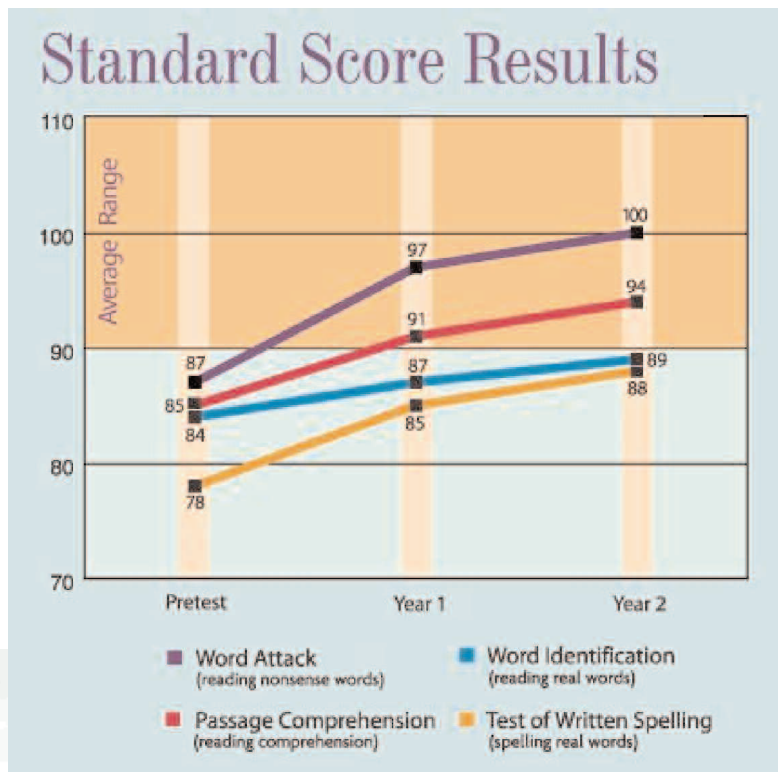
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-David C. Winters, Ph.D.
Executive Director of Clinical Affairs
32° Masonic Learning Centers for Children

32 Masonic Learning Centers
for Children, Inc.

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This chart shows some of the data now available thanks to the DCS system. This graphic displays how when children entered the tutoring program, their scores were below average in every category. After two years of tutoring, their scores had begun to close the gap with their classmates.

Today when a Center receives a child’s application, the Center Directors enter the information into DCS using a web-enabled interface. After that, DCS tracks which children were accepted into the program, when and why. If a child is determined to not be a good fit, that information is also managed, tracked and analyzed. In addition, DCS reports how many tutors are available to help prospective children, how many teachers are currently receiving training, and when new tutors will be available.

“With the DCS, we now deliver the same type of ROI information as for-profit organizations,” says Joseph. “At one time, we only had anecdotal data on how effective our Centers were. Today we know that 100% of children improve their standardized test scores with our tutoring.”

Solution Architecture

The DCS application is an n-tier application built on Visual Studio .Net with the business objects coded in C#. The application was written in a data driven fashion such that as new tests are developed or updated, they can be tracked within the system. All the data is stored in a central MS SQL Server 2000 database housed at the headquarters of the Masonic Learning Centers for Children.

Secure access to the application is provided to the users via MS Internet Explorer. Users are granted rights to the application through Active Directory. Reports are rendered directly to the end users browsers via MS Reporting Services. To support additional statistical analysis an interface to Statistica was also developed.

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Joseph J. Berlandi, Esq.
Executive Director
32° Masonic Learning
Centers for Children

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MASONIC LEARNING CENTERS CASE STUDY CONTINUED



Benefits

Centralized data repository increases efficiency, accuracy and reliability

The new DCS system creates a centralized repository for a wide range of information about students, tutors, trainees, certifications, and more. Various queries are now easily culled into spreadsheets for Center personnel, parents, students and dyslexia researchers alike.

"DCS gives us an entirely new level of functionality," says Winters. "For example, statistics about child enrollment used to be guesswork. With DCS, I now see the number of children who applied; where children are in the application process; how many were accepted and if not why; the total number of children enrolled; the number of children in their 1st, 2nd, and 3rd year of treatment; and the number of tutor programs successfully completed. There really is no comparison."

By making a wide array of information more accurate and easy to access, the DCS has enabled the Masonic Learning Centers for Children to help more children than ever before.

"I take great pride in having worked on the DCS system," says Peter Barrera, Vice President of Client Services for Greystone Solutions. "It's wonderful to know that every day this solution is helping more and more children overcome the challenges of dyslexia."

Web-based interface is easy to use

The DCS system was designed to have a web-based interface so any Center with an internet connection could easily access it. In addition, the GUI was created to be accessible and easy to understand for users at varying levels of computer skills. The result is a system that has quickly endeared itself to its many users.

"Simply put, I love it," says Winters. "I use DCS everyday and can access it from wherever I am, which can be in an office or on the road. Plus the simple interface has meant that all our Centers have adopted it quickly, whether the personnel are first-time users or IT experts."

Flexible architecture built to expand with center

The key to any long-standing software solution is a strong architecture, and DCS was built with a vision for expansion.

"The system is designed to make it easy to add future modules," says Winters. "For example, we plan to adopt additional tests and expand the number of children and Centers. DCS can handle these changes and more in a quick and cost-effective manner."

Robust system enables world's largest collection of research data on children with dyslexia

In developing the DCS system, the requirements were reviewed by two groups: the Data Collection System Committee, which assessed tutor, child, Center and IT concerns; and the Peer Review Committee, which consisted of the top researchers in the field of dyslexia.

"We always remember that we aren't collecting data only for us," explains Berlandi. "We are assisting the scientific community by gathering information they might never have otherwise."

As a result, the Masonic Learning Centers for Children now houses, perhaps, the world's largest database on teaching dyslexic children using a centrally administered approach. In 2005, the first scientific findings on dyslexia based on DCS data were presented at the Annual Conference of the International Dyslexia Association.

For More Information

For more information, please contact us today!

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We look forward to hearing from you and hope you build your next project with Greystone!

