

STG's solution helps the Michigan Department of Education Improve Teacher Certification Systems



SYSTEMS TECHNOLOGY GROUP, INC. (STG)
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⋮ **CASE STUDY**

Customer Business Overview:

This project was implemented for the State of Michigan, Department of Education. The State of Michigan law requires that any person employed in an elementary or secondary school with instructional responsibilities shall hold a certificate, permit, or vocational authorization valid for the positions to which he/she is assigned.

Business Domain Description:

Michigan's Office of Professional Preparation Services (OPPS) fosters the educational achievement of all the State youth and adults, Pre-Kindergarten through 12th grade, by assuring that all professional school personnel complete quality preparation and professional development programs that meet standards established by the Michigan Legislature and the State Board of Education.

OPPS is also responsible for maintaining the database of all the educational personnel who have met the requirements for certification in the State. OPPS is charged with issuing teaching certificates (both new and renewals) in the several categories such as Professional teaching, Vocational, Occupational education, and other ancillary support staff.

Project Business Description:

The Michigan Department of Education was using a proprietary application (L2K), for processing the Teacher Certification applications and issuing the certificates to educational personnel. L2K was a client/server system with MS SQL Server 2000 as the backend database.

Legislative, business requirements and technology were constantly changing; however L2K was not addressing all the changing needs for processing teacher certification and licensing applications, the State IT had to develop various independent applications. These applications are used for collecting or gathering data from various entities such as Universities, Bank, Test Scores etc., and the same data get imported periodically into L2K. It was becoming difficult, if not impossible, for the State to make enhancements, modify/update user interface or generate customized reports.

Michigan's objective in replacing its L2K system was to ensure that all educational personnel seeking certification who meet all legal requirements are processed in an expedient and efficient manner, and to ensure that Michigan schools employ fully certified educators for positions requiring State licensure.

STG Solution Overview:

STG helped the State to address critical process requirements with respect to over 400,000 certification records of teachers statewide. Michigan issues over 20,000 certificates and renewals and 25,000 permits annually. STG helped develop a fully integrated solution leveraging state of

the art web based technologies. STG developed automated interfaces to all the surrounding systems including the systems that provide the Teacher Certification Scores, Educational Entity Master, Registry of Educational Personnel, and Centralized Electronic Payment and Authorization System. The new application has a very intuitive wizard driven interface towards applying very stringent and complex business rules. The application provides very useful reporting capability and several adhoc report modules for performing what-if type analysis on our data to improve business effectiveness and serve our constituents better.

Technical Solution Overview:

Based on a detailed understanding of the State's business and technical requirements, STG developed Microsoft.NET based web application that was based on a service-oriented architecture (Windows Communication Foundation) and leveraged SQL Server 2008 with IIS 7.0.

STG developed the Online Educator Certification System with the following key features:

- Individuals seeking to take the MTTC or seeking certification or permits will be able to create and maintain a secured profile online. The profile will include the demographic data of the individual, some of which will be provided through the passing of parameters between the new system and the MSDS-UIC process.
- Individuals seeking certification or permits will be able to submit new or renewal applications online using electronic signature and check on the status of the application processing.
- Individuals seeking certification or permits will be able to pay the fees online using a credit or debit card or Electronic Fund Transfer (EFT).
- The general public will be able to verify/look up individual certificates and licenses online on the Michigan's web site.
- Universities/colleges will be able to submit their rosters via online single submission and/or bulk upload without having to put in the demographic data of the individual (s) that is (are) being recommended. Also must be able to generate customized reports.
- School districts will be able to submit requests online to Michigan Department of Education for temporary permits or annual vocational authorization (Single or bulk submission). Also must be able to generate customized reports.
- Process applications that were submitted online by the individuals in a timely manner.
- Process rosters submitted online by the higher education institutions for both new certificates and renewal of existing certificates.

- Upload scanned documents/credentials that are received from the individuals and make it part of their profile and have the documents available to be viewed by the Department of Education staff for processing.
- Update/modify records based on the user's role and maintain an audit trail of activity.

- Generate and customize reports using the data collected.
- Print Certificates/Licenses in batches.

Business Results:

The application developed by STG is a completely online system that has the capability to receive certification recommendations from over 40 teacher preparation institutions. The information stored and managed by the system is accessed by over 2400 school districts statewide. Michigan Online Educator Certification System provides:

- A highly automated capability towards timely submission and assessment of the applications and validation of very complex and stringent business rules.
- The lead time for receiving, assessing and issuance of certificates has been significantly reduced from weeks to just a matter of few hours.
- Automated payment processing has enabled the Michigan Department of Education to quickly receive and process payments.
- Michigan is able to provide improved customer service and improve efficiency in processing applications

Customer Feedback:

Flora Jenkins, Director, OPPS: "STG delivered a solution that is of top notch quality. The application is running smoothly and the State has already started enjoying the operational and financial benefits of the system. Michigan Department of Education has received very positive feedback from teacher preparation institutions, local school districts and many educators about how user friendly and expedient the application is."

Solution Artifacts: Screen Shots

The screenshot displays the Michigan Department of Education website interface. At the top, there are logos for Michigan Department of Education and Michigan.gov. Below the logos is a navigation bar with links for Michigan.gov Home, OTCS Home, MDE Home, Contact MDE, Online Services, and Logout. A left-hand navigation menu contains various options such as Home, Manage Profile, Work List, Conviction Review, School District, Out-of-State Applicants, Addl. Endorsements, 2 Yr Prov/IOC Extension, 3rd Prov/IOC Renewal, Manage Permits, Manage Annual Vocational Authorizations, View/Upload Data, Print Certificate, and Manage Master Data.

The main content area is titled "Perform Actions" and contains a "Permit Information" section with the following details:

- Appl. #**: [3454523](#)
- Permit Type**: Full-Year (Renewal)
- Status**: Pending-Evaluation
- Permit Holder Name**: Susan Taylor
- Submitted By**: Capital Area Academy
- Submitted On/Approved On**: 02/10/2009
- Basic Skills**: Passed
- Elementary Education**: No Score

Below the permit information, a red message states "CLEARING HOUSE MATCH FOUND".

The "Remarks History" section contains a table with the following data:

Action	Status	Email Sent	Modified By	Modified On
Approve	Pending-Payment	Yes	User 1	02/01/2009
Hold	Hold	Yes	User 1	01/01/2009
Deny	Denied	Yes	User 2	02/15/2009

At the bottom of the remarks history section, there is a label "* Action" followed by a dropdown menu currently set to "Select..."