

# Security and Confidentiality Issues in Web-Based Data Submission

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Jason Thompson, assistant director of the National Data Evaluation Center, demonstrates the ease and convenience of data submission using the World Wide Web.

Have you ever purchased anything over the Web? When you enter your credit card number, do you hesitate for a minute wondering if this is a good idea? Who might access your personal information? What might they do with that information? These are good questions to ask. When you submit your Reading Recovery data, we do our best to ensure you have nothing to worry about.

Submission of student data to the National Data Evaluation Center (NDEC) via the Internet follows a series of strict laws, rules, and best practices. Currently, 85% of all teacher training sites nationally use the NDEC Web site. This represents over 16,000 teachers. All data sent to NDEC, whether via optical scan form or via the Internet, is protected by a series of measures.

Student data are protected by two sets of federal laws. One set of laws protects the privacy of student records. These laws usually apply to school districts. They prevent school districts from releasing student records to anyone but the students and the parents except for certain specific circumstances. Data sent to NDEC from school districts remains the legal property of those school districts. NDEC is bound to use data only as agreed upon and to release data only under a strict set of guidelines.

A second set of laws is intended to protect human subjects for research purposes. NDEC is also bound by those laws and federal regulations. For NDEC, the protection of human subjects (i. e., Reading Recovery and random sample students) through the enforcement of applicable laws

and regulations is assured by The Ohio State University's administration through its Office of Research Risks Protection.

NDEC has developed a series of procedures to guard data that includes written policies for releasing data to authorized parties and the physical protection of the data. The NDEC staff receives ongoing training on these rules and procedures.

Although the reporting of student data on an annual basis to The Ohio State University via NDEC is required under the trademark agreement, not all the data as it is currently reported to NDEC is required by the trademark. In addition, local school board regulations can override NDEC requirements. For example, school districts are not obligated to report student names to NDEC. Teachers may leave those fields blank or use aliases (such as Student 1, Student 2, etc.). NDEC assigns an identification number to each student record via the optical scan form's unique number or a computer-assigned number (for those doing Web-based data submission). These unique numbers can be used to identify students by teacher training sites without sending their names to NDEC. Similar decisions not to send certain data to NDEC, however, need to be made at a district level based on existing school board policy rather than on an ad hoc basis by school officials.

Web-based data submission to NDEC follows its own strict set of

guidelines and uses best practices involving transfer of confidential information via the Internet and protection of the database. These guidelines include

- Access to the confidential portion of the Web site requires logging in with both user names and passwords.
- Data entry to the NDEC Web site is controlled by the teacher leader or leaders at each teacher training site. Teacher leaders are certified annually by their university training centers, meaning that only currently active teacher leaders registered through a formal, written process can gain access to a teacher training site's data via the Web.
- NDEC then issues nationally unique identification numbers and passwords to teacher leaders. Teacher leaders doing Web-based data submission are required to sign an agreement that specifies what security measures they need to implement.

- Teacher leaders register teachers with NDEC on an annual basis through a formal, written process. NDEC then issues nationally unique identification numbers and passwords for Reading Recovery teachers to the teacher leader; teacher leaders provide these confidential user names and passwords to teachers. NDEC encourages teacher leaders to have teachers using the NDEC Web site sign a confidentiality agreement (available in the Documents section of the NDEC Web site) intended to make teachers aware of confidentiality and security issues. In addition, teacher leaders can change teacher passwords to effectively revoke Internet privileges at any time.
- The NDEC Web site is a VeriSign Secure Site. This means the site has a VeriSign Secure Server ID. This is an assurance by an independent third party, Verisign, that all

information sent to the NDEC Web site, if part of a secure transaction, is in an SSL session (SSL is an abbreviation for secured socket layer, meaning that after login, all communications between a teacher's computer and NDEC's computers are encrypted, thus protecting against disclosure to third parties). NDEC uses 128-bit encryption, the Internet industry standard for secure online transactions.

- The NDEC computers are protected by a firewall, an electronic device that blocks inappropriate attempts to contact NDEC's computers. Additional, undisclosed server-side security and other measures are in place to prevent unauthorized access.

Through the measures described above, NDEC complies with all applicable laws and regulations and ensures the safety of Web transactions and the integrity of its database.



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