

The Optimal Reference Book:

Revisions to FERPA Guidance

Extraordinary insight™ into today's education information topics



ESP Solutions Group

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Revisions to FERPA Guidance

Introduction

Serving students is what schools are all about. Determining how best to serve students, however, is a challenge. Teachers and administrators use a variety of types of information when they make instructional and support decisions about students, including review of previous work completed, assessment scores, disciplinary records, and intuition. Most of that information is kept in student records, thus it is important for educators to have access to the records. But some of that information is sensitive, so safeguards must be in place to shield the records from outside viewers.

The Family Educational Rights and Privacy Act (FERPA) of 1974 (revised over the years) lays out requirements for maintaining the confidentiality of student records. It specifically describes parent and eligible student rights to see the data maintained and request changes. It also describes who may have access to student records without parent or eligible student permission, namely those with a legitimate educational interest within the education system, and others charged with the health and safety of students and other people.

FERPA requires education agencies and institutions to have policies and procedures to ensure the confidentiality and security of student records. Among those policies are requirements concerning the release of data, such as in reports and to research organizations, and security provisions.

ESP Solutions Group has worked with many state and local education agencies to implement policies and procedures to guard the confidentiality of student data. The guidance we provide on FERPA and other issues has been summarized in a series of documents called Optimal Reference Guides which are available on our website at www.espsolutionsgroup.com. Three documents have been written that specifically address requirements of FERPA.

- *Guidelines for Accessing Student Records in a State Longitudinal Database* – This paper describes policies and practices to be used by a SEA to guard the confidentiality of student records in a longitudinal database.
- *Confidentiality and Reliability Rules for Reporting Education Data* – This paper provides specific guidance on how to protect confidentiality of student records in reporting education data. In addition, it discusses the issues related to establishing reliability counts for accountability systems. This report addresses important issues raised in regulations concerning FERPA.
- *FERPA: Catch 1 through 22* – This paper describes changes that could be made to FERPA to better meet the needs of the PK-12 community related to maintaining and exchanging student data.

The U.S. Department of Education (USED) has proposed revisions to the Family Educational Rights and Privacy Act. These revisions are intended to address questions that have been raised by education agencies and institutions, including

elementary/secondary agencies and postsecondary institutions. The revisions were published in the Federal Record on March 24, 2008. Responses to the revisions are due to USED by May 8, 2008. Final revisions will be made and published after that.

The three FERPA documents have been reviewed and revised to reflect information contained in the proposed revisions to regulations related to FERPA. Should substantial changes be made to the regulations other than those proposed, these documents will again be reviewed and updated.

To assist the reader in understanding what changes are proposed to the FERPA regulations, we have summarized in everyday language the contents of the revisions. This list has not been reviewed by USED representatives. The contents of this document represent the author's analysis of the significance of each revision to the PK-12 community.

The points below are arranged in the approximate order in which they appear in the Federal Register notice. Citations are provided to assist the reader wishing to go to original sources for review.

**Department of Education, 34 CFR Part 99
Family Educational Rights and Privacy; Proposed Rule
Federal Register, March 24, 2008**

- Attendance is more broadly defined to include "attendance by videoconference, satellite, Internet, or other electronic information and telecommunications technologies for students who are not physically present in the classroom." §99.3
- The student's Social Security Number (SSN) or other student identifier may not be designated as directory information. These identifiers could provide access to other sensitive information about the student. §99.3
- Student user identifiers or unique identifiers used by students to access or communicate in electronic systems (e.g., email addresses) are considered directory information, but only if they cannot be used to access education records except when used with one or more factors to authenticate a user's identity (e.g., password, PIN) known only by an authorized user. They cannot be opted out by parents or an eligible student (a student over the age of 18 or one attending a postsecondary institution) such that the student could attend classes anonymously. Similarly, names on class rosters cannot be opted out. §99.3
- Disclosure means the release of personally identifiable student information to any organization or person other than the one who created the record or provided it. Thus, transcripts and other information obtained from a sending agency or institution can be returned by the receiving agency or institution to the sender for verification of accuracy. §99.3
- LEAs may be given access to the data that they provided to the SEA for maintenance in a statewide student database. A consolidated State database often provides more useful access to data than the way the data are maintained at the local level. §99.3

- Alumni records developed after a student has left the school that do not pertain to the student's educational activities are not considered education records and are not covered by FERPA. That is, these records can be released. The key point is that the alumni information is not related to the student's educational record. Generally this includes name, address, and other typical directory information, such as date of graduation. § 99.3
- Student educational records with personally identifiable information can be disclosed to State auditors to do an audit of a Federal or State supported education program, not just State or local educational authorities. §99.3
- Parents of eligible students can be provided information from the student's education record if the student has violated Federal, State or local law, or if the student is under the age of 21 and has committed a school-determined disciplinary violation due to alcohol or controlled substance usage or possession. §99.31(a)(15)
- Personally identifiable information can be released to appropriate persons about a student in connection with an emergency if the knowledge of such information is necessary to protect the health or safety of the student or other persons. §99.31(a)(10), §99.36(a)
- Annual notification must include information about who may have access because of legitimate educational interest to individually identifiable student information without parent or eligible student permission. This includes notification that contractors, consultants, volunteers or other outside service providers will have access to student education records, where appropriate. §99.31(a)(1)(i)(B), §99.7(a)(3)(iii)
- Outside service providers can have access to student records if they are performing the work normally done by school district personnel. They cannot disclose information from the student records without prior written consent of the education agency or institution. §99.31(a)(1)(i)(B), §99.32(b)
- Education agencies and institutions are responsible for their outside service providers' failure to comply with FERPA requirements. Thus these outside service providers must conform to institutional requirements. The data to which they have access may only be used for the agreed upon purpose. The agency or institution must maintain direct control over the outside service providers with respect to the maintenance and usage of the student records data. §99.31(a)(1)
- Records must be kept of all outside persons or groups who obtain access to students' records. Though not required, records may be kept of school officials' access to students' records to ensure the agency or institution is in compliance with FERPA regulations. §99.31(a)(1)(i)(A)
- Agencies and institutions must use appropriate physical, technical, administrative, and operational controls to limit access to only those school officials (i.e., staff) with a legitimate need to know (e.g., role-based security features). Policies must exist to ensure that controls are in place. §99.31(a)(1)(ii)
- Data can be provided to researchers if the research organization ensures the security of the data and if the agency or institution providing the data agrees in writing to the purpose of the research. The agency or institution does not have to agree with or endorse the findings of the study. §99.31(a)(6)

- Written consent is not required in order to disclose information in response to an *ex parte* order from the Attorney General (or designee) regarding an act of domestic or international terrorism. §99.31(a)(9)
- Written consent is not required in order to disclose information received through a State community notification program about a student who is required to register as a sex offender in the State. §99.31(a)(16)
- Release of records with all personally identifiable information removed is not considered a disclosure. Agencies or institutions may implement procedures for the de-identification of information. Reasonable attempts should be made to eliminate the capacity to identify individual students in released information. This includes consideration of data about the students released in other documents that could be combined with the de-identified information to make identification possible. §99.31(b)
- Agencies and institutions must use measures to ensure that individual students cannot be identified from aggregate data (e.g., restricted cell size, use of ranges of data, converting continuous data to categorical data, or data swapping). §99.31(b)
- If a unique identifier is attached to de-identified records to facilitate matching of data sets, recipients of the data may not be allowed to have access to information on how the identifier was generated and assigned. These identifiers may not be based on the student's SSN or other decipherable information such as combinations of identifiable information (e.g., first three letters of last name, first initial, date of birth, place of birth used to generate an identifier). §99.31(b)
- PK-12 records can be consolidated with postsecondary education records into a single database if there is a legal or regulatory authorization for an audit, evaluation, compliance or enforcement activity. §99.31(c)
- SEAs can transfer a student record to a student's new school on behalf of the former district. §99.35
- LEAs can release disciplinary information on students if the conduct of the student constitutes a risk to himself/herself or others. §99.36(c)
- Disciplinary information can be shared with teachers and other school officials within the agency or institution. §99.36(c)
- According to No Child Left Behind, disciplinary information concerning suspensions and expulsions must be sent to a district where a student is seeking to enroll.
- If an eligible student or his/her parents has opted out of the release of directory information while the student was in attendance at a school, then that information cannot be released after the student leaves the school as well, unless the student/parent rescinds this request. §99.37(b)
- A SSN cannot be used to identify or help identify a student or the student's records when confirming directory information. This would provide a link to confidential data and would constitute an invasion of privacy. §99.37(d)

ESP Optimal Reference Guide: Guidelines for Accessing Student Records in a State Longitudinal Database

Foreword

By Glynn D. Ligon, Ph.D.


A few years ago, I was invited to volunteer to help the over-worked counselors at our local high school. They needed people to review graduation requirements and make sure individual students had met all requirements to graduate. My FERPA alarm went off right away, and I did what we dads do — donated money to the graduation party instead. This was in the same state where I was told I could not see my own actual score on the educator competency test for certification. This was the same district that had published the average test score for our son's grade level when there was only one other student who had voluntarily taken a test. This was all in the town where the university was hacked twice — once losing control of my Social Security Number and once of my daughter's. Actually, I could go on, because there were other incidents.

So I read this white paper with personal interest to see if there are any new solutions, any promise that personally identifiable information in our education information systems is going to be safer in the future than it has been. The bottom line? We must have clear and precise policies that direct agencies to follow clear and specific processes — no short cuts, no easy solutions, and no free pass on the almost impossible balance between easy access for authorized users and security. Whether access was ever an easy issue to monitor or not, it promises to continue to increase in complexity.

If "locks only keep honest people out," then are we just as misguided in how we restrict access to our useful education data? Are we so wary of unauthorized access to confidential information that we have designed elaborate systems that keep legitimate users out? Maybe we are not keeping them out physically, but the series of portals, sign-ons, and passwords between them and the data they need might be too much to navigate.

In 1996, I wrote a paper for the National Center for Education Statistics (NCES) on the future of education information systems, *New Developments in Technology: Implications for Collecting, Storing, Retrieving, and Disseminating National Data for Education*. One of my "predictions" was that dissemination would be replaced by access. So much effort was being put into disseminating copies of reports in 1996 that it was clear that we needed our future information systems to deliver to us just what we needed at the time we needed it. So here we are, a decade later and worried about managing access.

I am convinced that we are at a better place for data driven decision making (D3M). I encourage us all to open our information systems as much as possible to



encourage use rather than be stymied by a fear that a few people might see some information they are not authorized to access. Our collective wisdom will keep us from erring too far on the side of openness. In the meantime, better informed decisions just might improve the teaching and learning process for our students.

When developing a longitudinal student records system at the state or local level, an important aspect to consider is who will have access to the information contained within the system, since the contents of student records are supposed to be zealously guarded according to the Family Educational Rights and Privacy Act (FERPA). This paper addresses the types of policies and procedures that are needed to ensure that access to student records is only available to persons with a "legitimate educational interest."

This document has been revised to reflect proposed revisions to FERPA regulations expected to be completed by summer 2008. Where specific guidance has been developed, clarification has been added to the text. However, there are issues covered in the revised regulations that do not relate directly to data maintained in state longitudinal student databases; these revisions and comments are not addressed in this paper.

Introduction

When parents enroll their children in school, a **student record** is created. Parents provide certain types of information about the family (e.g., parents' names, home address, telephone number, sibling information), the child (e.g., date of birth, place of birth, home language, immunizations), and other areas of interest to the school (e.g., name of emergency contact). This information is entrusted to the school (and the district where the school is located) with the assumption that the information will be used only when necessary for ensuring that proper educational experiences and services are provided to the child.

While the child is in school, the student record is filled with information relating to the educational activities of the child, any services provided, and other aspects of the child's educational experience. Information about attendance, course completion and grades, honors, program participation, transportation, assessments, extracurricular activities, etc. is compiled in the record as milestones are met or as the need for a paper trail arises. Information is contributed by teachers, administrators, counselors, school health officials, program directors, and others within the education system. In rare instances, information about events from outside school hours and locales is entered into the student's record, such as information related to legal, health, or family problems. Clearly, there may be sensitive information in a student record that should be zealously guarded for the sake of the child.

When a child seeks to transfer to a school in another school district, the receiving school/district has a right to obtain a copy of the student's record. The receiving school/district can receive any information the sending school chooses to provide.

A subset of this information is included in the student's **transcript**. A transcript is typically sent to a postsecondary institution where a student is applying, to a scholarship organization, to the military, or to an employer if requested. It contains information about course completion and grades, honors, activities, and other information that is not quite as sensitive as other data maintained in the student record. The student (or his/her parent) gives permission for the transcript to be sent. Federal and state laws place restrictions on who may have access to student records. These laws specify requirements that must be met by education agencies to guard the contents of the student records. These laws do not, however, restrict

 **ESP Insight**
Federal and State laws place restrictions on who has access to student records, but not the various types of data maintained within the record.

what data may be collected and maintained about students. That is left up to the educators who must decide whether specific data are needed to ensure appropriate educational and support services are provided to each student and whether the maintenance of the data is ethical. Schools and districts must decide what policies and procedures are needed to restrict who has access to the students' records.

Historically, student records have been maintained in a variety of places, mostly in paper files in filing cabinets in the school office or in teachers' classrooms. Attempts to merge the information for a student from various sources are often cumbersome and sometimes unsuccessful, such as when a student transfers from one school to another. Accumulating information across student groups for state and federal reporting is difficult and time-consuming. Security is virtually non-existent. Locked file cabinets in schools rarely stay locked during the day because information is needed from them. Still there have been few concerns about the confidentiality of the education records or about the misuse of information kept within them.

Computers have made it easier to keep larger amounts of information in one location (or linkable locations) and to use the information for making effective and efficient education decisions. But computerizing student records has raised a number of concerns about confidentiality and misuse of the information by persons who should not have access to the information in a student record. It is the responsibility of an education agency maintaining records about individual students to ensure that confidentiality and security concerns are addressed and that parents and students are informed of the measures used.

The purpose of this paper is to provide guidance concerning the policies and procedures needed to ensure access to an electronic student record and its contents only by those who have a "legitimate educational interest." The paper contains information about:

- The role of federal and state laws restricting who may have access to a student record and its contents
- Longitudinal data systems and how they are maintained at the state and local levels
- Data elements and levels of sensitivity
- Procedures for secure collection and maintenance of data
- Determination of who can have access to what data
- Providing data from the longitudinal student records system

This document builds on the contents of other documents, which are referenced at the conclusion, such as the *Forum Guide to Protecting the Privacy of Student Information: State and Local Education Agencies* and *Building an Automated Student Record System*. The Forum Guide contains a more complete overview of the federal laws relating to student records, as well as general guidelines for state and local education agencies. The other document describes the steps that should be followed in order to develop a well-designed and useful system. This document on data access, however, goes beyond the other documents to offer more specific recommendations to state education agencies (SEAs) as they build their longitudinal student records systems.

Laws Requiring Protection of Student Records

Key Definitions

- **Confidentiality** refers to an obligation not to disclose or transmit information to unauthorized parties.
- **Security** refers to technical procedures that ensure only authorized and intended parties have access to data.
- **Personally identifiable information** is data that can reveal an individual's identity.
- **Longitudinal student records system** is a computer system that contains individual student records linkable across school years and sites.

The Family Educational Rights and Privacy Act (FERPA), passed by the U.S. Congress in 1974, provides for the protection of information about students and their families. It reinforces the right of education agencies to collect and maintain data about students, but it restricts the access to that information to educators with a "legitimate educational interest," i.e., the information is needed in order to carry out their professional responsibilities. In addition, FERPA gives the right of access to parents as well as the right to restrict release of the information in some instances. Federal education programs adhere to the requirements stated in FERPA, and great care is taken in the collection and release of student data by the United States government.

Other federal laws provide clarification and restrictions on the access to and use of student records, including the Individuals with Disabilities Education Act, the Richard B. Russell National School Lunch Act, the Children's Online Privacy Protection Act of 1998, and the Health Insurance Portability and Accountability Act of 1996. The reader is urged to review the discussion of these and other federal laws in the *Forum Guide to Protecting the Privacy of Student Information: State and Local Education Agencies*. The discussion in Section 2 of the *Forum Guide* is very complete and was written with assistance from USED.

Most states have passed laws that are similar to FERPA. Others have incorporated similar language into state rules and regulations. Most state laws and regulations address parent and student rights to have access to the student's records and restrict release of individual student information to certain situations.

Many state laws and regulations specify what types of data may be considered directory information, a distinction made in FERPA. Directory information generally is the information that appears in public documents such as school yearbooks, school rosters, athletic programs, and press releases concerning student honors. Directory information is considered the portion of the education record that would not generally be considered an invasion of privacy if disclosed, and it may include student and parents' names, address, and telephone number; school activities and honors; height and weight of athletes; and degrees received. Proposed regulations



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for FERPA include a student's user ID or other identifier used to access or communicate in electronic systems (e.g., email address) as directory information.

In some instances, state laws and regulations are more restrictive than FERPA. For instance, one state's law related to student records forbids release of the address and telephone information for elementary and secondary school students, such as in a school directory. Some states make mention of groups to whom student directory information may be released, such as military recruiters. States can have more restrictive laws and regulations, but they cannot be less restrictive than FERPA.

FERPA requires education agencies to have policies concerning education records and to notify parents and eligible students (students over the age of 18 or who are enrolled in postsecondary education programs) of their rights with regard to the student's education record. Most states leave the specifics of how this is done to the Local Education Agencies (LEAs), but some provide guidelines and sample policies and forms.

A question may arise as to whether a state's open records law is relevant to this discussion. Each state has its own open records law based on the Federal Freedom of Information Act (FOIA). As FOIA does for federal agencies, state open records laws direct state and local government agencies to make all records and data "available to the greatest extent possible, based on the principle of openness in government," unless restricted by some other statute. With regard to student records, FERPA is the relevant law, so restricted access to student records is crucial. But it behooves a state education agency to make as much information as possible available concerning the progress and success of public schools while maintaining the confidentiality of individual students' records.

The information in this document is meant to help a state (or local) education agency to develop policies and procedures that will reassure students and their parents that access to the content of the student's record will be restricted according to best practices and federal and state laws and regulations.

Longitudinal Student Records Systems

Most state education agencies have begun to collect individual student records from local education agencies. The data maintained in these longitudinal data systems includes information obtained from local education agencies and information the state has access to directly, such as state assessment scores. LEAs are required to provide data for each student such as personal information, program participation information, courses taken, and other information. This is a subset of the information LEAs maintain about students in their student information systems (SIS) and other systems dealing with food programs, transportation, library usage, etc. Usually the data are collected on a periodic “snapshot” basis, but some state education agencies maintain “real-time” records of the students.

The purpose of the state longitudinal student records system is to provide essential information for monitoring progress of the schools and districts in meeting performance requirements for students. The information in the system is used for federal and state reporting related to programs and for funding the education system. Ideally, the state education agency (SEA) can use the system for doing research on what appear to be successful schools and the programs they offer. These systems also provide the capacity for handling *ad hoc* queries from state legislatures and others interested in the functioning of the education system. The longitudinal student records system should not be used, however, for locating individual children unless the SEA is directed to do this by the state’s Attorney General.



The purpose of the state longitudinal student records system is to provide essential information for monitoring progress of the schools and districts in meeting performance requirements for students.

One State’s Written Purpose: The student information system is intended to support better decision-making and policies for improving the performance of students and schools, reduce reporting burden (ultimately), help to facilitate the entry of students into a new district, and ensure that timely, high quality data are available to legitimate users.

A key component of the longitudinal student records system is the capacity to track individual students across years and sites within the state. This requires a unique identifier and a means for schools to obtain the identifiers for students who move into the district. (Information on student identifiers can be found in the ESP Solutions Group *Optimal Reference Guide: Statewide Student Identifier Systems*.) Some states have used a student’s Social Security Number (SSN) as the unique student identifier; however, we do not recommend that.



A key component of the longitudinal student records system is the capacity to track individual students across years and sites within the state. This requires a unique identifier and a means for schools to obtain the identifiers for students who move into the district.

Issues regarding the ownership of the student records have been raised in working with a number of state education agencies. A **data owner** is the person who has the ultimate right to say what is true (e.g., the umpire owns the call on what is and is not a strike). The data owner may or may not maintain or control the actual data. Core demographic data about each student are “owned” by the student and/or his/her guardian (if white parents say their child is African American, then the student should be recorded as African American). Attendance, grade, and IEP data are “owned” by the school district where they originate. State assessment data are “owned” by the state. Such ownership distinctions do not impact access rights granted by FERPA.

Districts and states share stewardship responsibility for student data to fulfill state and federal reporting responsibilities. A **data steward** is the primary contact for an organization that is managing a particular set of data and is, therefore, responsible for ensuring standard data definitions are established and met and for securing appropriate access. As student record data stewards, they are responsible for providing all parties with “legitimate educational interests” with access to student records and data “to the greatest extent possible, based on the principle of openness in government.”

Identifying Data for Inclusion in Longitudinal Student Records Systems



A crucial beginning step in developing a state longitudinal student records system is deciding what data elements should be included about individual students.

A crucial beginning step in developing a state longitudinal student records system is deciding what data elements should be included about individual students. Categories of information maintained in local student records systems typically include: Personal information (e.g., demographic characteristics), membership (including enrollment, attendance, and completion), federal program participation, school program participation, school participation and activities, non-school and post-school experiences, assessment, transportation, food services, and health conditions. Discipline data are maintained in a variety of ways in the states. What is submitted to an SEA is a subset of the data in these categories. (More information about selecting data elements for inclusion may be found in the document *Building an Automated Student Record System*.)

It is important for an SEA to identify a data steward for different types of data. As noted above, the data steward should be knowledgeable about federal and state reporting requirements, and provide oversight for the accurate and complete collection of data. Efforts should be made to synchronize data between data stewards, particularly programs that use the same data elements, such as race/ethnicity, gender, and economically disadvantaged status. In general, an authoritative data source, such as the federal government, should trump other sources; however, inaccuracies should be corrected, wherever they reside.



The SEA should develop a metadata dictionary containing all of the data elements included in the longitudinal student records system.

The SEA should develop a metadata dictionary containing all of the data elements included in the longitudinal student records system. Typically, this is a shared-application that contains a list of data elements with related metadata, such as definition, format, formulas used (if any), periodicity, uses, source, location, and access levels and conditions. Determining access levels will require careful consideration of the sensitivity of the data collected. (Access levels are covered below.) The metadata are essential for promoting data quality, as well as security.

Concerns about confidentiality of data in state longitudinal student records systems often relate to fear of having large amounts of sensitive personal data being kept in databases. SEA personnel identifying data elements for inclusion in a longitudinal student records system should select only those data elements that are crucial for reporting, analysis, and decision-making.

Procedures for Secure Collection of Data

The mechanisms used by the SEA to collect data from schools and districts must provide for the protection of the individual student data while in transit. Care must be taken at the local level to ensure that data entry and transfer are done by persons with a right to access and provide the data. This does not include students.

Electronic means of transmitting data are being used more and more, yet concerns about the safety of these means continue. While transfer of data using the Internet is generally considered safe, there are precautions that can be taken to promote confidentiality, such as encryption.

Longitudinal student records systems must contain data that have been provided by authenticated providers. This means that someone from each data provider, be it school or district, must have a secure means of logging into the system to upload the data. The data provider must be a trusted person identified by the school principal or district superintendent.

Persons responsible for enrolling students into a school or district must have a way to identify an existing unique student identifier or assign a new identifier so that the identifier can be attached to the student record that goes to the SEA. This means that trusted individuals must have secure access to a student identification locator system. This access is different than either the access needed to submit data and the access needed to view and use the data. The management of all types of access will be discussed more below.



Persons responsible for enrolling students into a school or district must have a way to identify an existing student identifier or assign a new identifier so that the identifier can be attached to the student record that goes to the SEA.

Secure Maintenance of Student Data within the State Education Agency

There are many procedures that are needed to maintain a safe and secure longitudinal student records system. A crucial component is the decision about who can access the contents of the system, discussed below. However, other items that must be considered are the physical location of the hardware, software, and network containing the student records system, and how this location can be made secure from break-ins and potential disasters.

Databases must be kept secure from outside intruders through the use of passwords, firewalls, and other measures. Unauthorized changes to data must be avoided. Procedures should be in place to track who has access to student records and record when access is obtained. More detailed information on technology and security can be found in the *Forum Unified Education Technology Suite*.



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Determining Who Has Access to State Individual Student Records

Access to individual student records is allowed by FERPA for anyone with a "legitimate educational interest." This means that student records can be disclosed to school officials needing to review education records to fulfill their professional

responsibilities without parental permission. For the most part, records are needed by educators that have daily contact with students, such as teachers, counselors, and administrators. Other officials within the school system may also have a need for individually identifiable information, but generally summary or aggregate data should serve their purposes. An SEA with a longitudinal student records system must develop a policy concerning access to student records, and define the criteria for determining what is a “legitimate educational interest” and what type of person has a “legitimate educational interest.”

SEA Personnel. At least some SEA staff may be considered to have a “legitimate educational interest” in individual student records according to FERPA. However, decisions about individual children generally are not made at the state level, hence there is little need for SEA staff to have access to individually identifiable education records. On the other hand, SEA staff responsible for the education of students receiving special services (such as special education, vocational education, migrant education) may have a need to see individual students’ records. Assessment specialists may have a need to look at individual student records to confirm scores or review other information such as eligibility for Title I. It is important to determine exactly who within the SEA, if anyone, must be able to obtain information on specific students from the central database.

For the longitudinal student records system to be used as an analytical tool, it is probably not necessary for anyone within the SEA to access an individual student’s record, thus it makes sense to strip identifying information from the individual records and create an analysis file which will promote confidential maintenance of the data. It should be noted, however, that stripping name, address, and ID number from each student’s record in the system does not guarantee that a student will be unrecognizable if the student has characteristics that are unique within his or her school or district. It will, however, provide a hurdle to potential intruders into the system. There is no sure way to remove all of the information that could identify an individual student other than encryption. Encryption, however, adds complexity to the legitimate use of the system. As a result, the best approach is to manage and secure access to the system. Users of the system must be informed of their responsibilities related to maintaining the confidentiality of the data.

Someone within the SEA (such as a system administrator) must have responsibility for ensuring the accuracy and completeness of the data submitted by the school districts. Checks should be made for data that fall outside of the expected range of information, for incorrectly formatted data, for combinations of data that seem suspicious (such as bogus students or unusual circumstances), and for incomplete sets of data. Verifications will be needed when records must be combined from different time periods. Someone will have to have access to the individual records within the system to be able to do these checks.

A database with individual student education records could be considered useful for a variety of purposes not intended by SEA staff. SEA staff may



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believe that the database is meant only to be used as a means of doing effective analytical studies and compiling data. Other people may see the database as the source of information about individual children. For instance, non-custodial parents may contact the SEA to find where their children are currently attending school. Legal opinions may be necessary to ensure that data are not released inappropriately. Staff will also need to know when and what data can be released.


LEA Personnel. Local education agency personnel have not traditionally been allowed access to state systems, as they should have copies of most if not all of the data within their own systems. However, the sophistication of the local data systems may not allow for the types of analysis that local educators might like to do with “their data.” Also, there may be data in the state system that does not reside in the LEA system, and LEA educators might like to have access to these data. As a result, access for school and district personnel to their data in the state’s longitudinal student records system is more important than ever. This access is allowed according to the proposed FERPA regulations.

A common assumption is that a principal (or his/her designee) should have access to information about all of the students in his/her school. Similarly, a district superintendent or designee should be able to see data about all of the students in his/her district. Besides providing access for submitting data to the state as mentioned above, access should be provided to review the data submitted to ensure that they are correct. In addition, access should be provided for use of analytical tools provided by the SEA to anyone approved by the district superintendent or school principal. This may include people such as school counselors, district research and evaluation personnel, and district finance officers.

Since the data compiled by the SEA may come from a variety of sources, the LEA may want to download a copy of all of their data for use at the local level. This will require very specialized technical access and approval from the district superintendent, but is not prohibited by FERPA.

Districts have “legitimate educational interests” about the students they serve, and, therefore, should be granted full access to all data in the SEA longitudinal student records system related to students currently enrolled in the district, including information before the enrollment period. It would be useful to have access to data about students previously enrolled in the district for the purpose of longitudinal analysis; however this is not addressed in the FERPA regulations, and may be prohibited.

Ideally, a school and district should be able to obtain information about a student’s previous enrollments within the state and other relevant information from the state’s longitudinal student records system. When a student moves today, usually only the information from the immediate past school/district is provided to the receiving school. Information about highly mobile student is useful to help schools better meet the student’s needs.

 **ESP Insight**
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education agency.*

Similarly, a school and district should be able to obtain information about what happens to a student after he/she is no longer enrolled in the school/district. For instance, when a student moves to another school just prior to when the state assessment is given, the sending school/district should be able to find out how that student performed. This is useful data for adjusting instructional programs. Also, it would be useful to know if a student graduated after moving from one high school/district to another. This information should be readily available to appropriate persons from the longitudinal student records system. However, it is not clear from the FERPA regulations whether such access would be allowable.

Researchers, consultants, and contractors. According to FERPA, personally identifiable information about students may be released without parental permission to persons or organizations outside of the SEA authorized to conduct research and evaluation studies or to contractors conducting data collection and maintenance activities for the state education agency. Authorization for researchers is for the purpose of increasing the existing body of knowledge about education in the state or conducting audits. Outside persons or organizations conducting research should be required to submit to the appropriate state education agency official a written request for permission to have access to personally identifiable data that explains the purpose of the research study and how the researchers will ensure data confidentiality and security. The release of student data to researchers outside the agency is considered a loan of data (i.e., the recipients do not have ownership of the data). Researchers should be required to destroy the data once the research is completed.

SEAs may contract with outside organizations to conduct data collection and maintenance activities which include personally identifiable student data. This is specifically noted as permissible in the new FERPA regulations. Outside organizations should be required to adhere to the SEA restrictions related to confidentiality and security of the data and should attest to that as a part of the contractual process.

Parents. Parents must be given access to the data maintained about their children within the state database. Upon the request of any student (or the student's parent/guardian if the individual is under the age of eighteen) under Section 99.20 of FERPA to gain access to his/her (child's) record contained in the student information system, the state education agency must provide a copy of all or any portion of the record in a comprehensible form. In addition, the SEA must consider requests to amend the record if requested by the parents or student. Since most of the data originate in the local education agencies (and may be considered to belong to the local education agencies), parents/guardians should seek first to review and amend the student's record through the local education agency. The state education agency must have a policy for updating changes that come from the local education agency or directly from the parents or student.

Others. Governors, lawmakers, state board of education members, and others may think that they have a right to gain access to individual student records. For instance, one state's legislature wanted to have access to a central student database so that its members could do studies to predict how many students would qualify for state-sponsored scholarships. Arrangements should be made to provide policy makers with the information they need rather than giving them access, thus protecting the confidentiality of student records.

Levels of Access

One way to document access is to determine levels of access from "Access to All Data" to "Access Only to Non-Identifiable Aggregate Data." Each staff position can be assigned a level based on whether he or she has a "legitimate educational interest." Full access must also be given to the technical managers and programmers responsible for making the system work. Staff should be trained on the SEA's acceptable use policy, and sign a document indicating they will abide by the rules of the policy.

Data elements should also be assigned levels of access from "Available to Anyone" to "Highly Restricted." Data elements considered "directory elements" are generally available to anyone. Test scores, health information, and other types of evaluation data should be considered highly confidential. Assignment of levels of data access to levels of staff access can be by data category or for each data element.



Data elements should also be assigned levels of access from "Available to Anyone" to "Highly Restricted."

The following table shows how staff members can be assigned access to data categories.

Table 1: Staff Member Access to Data Categories							
Student Data Sections	SEA Chief	Current LEA Admin to Current Data	Current LEA Admin to Past Data	Past LEA Admin to Later Data	Current Teacher to Current Data	Current Teacher to Past Data	Past Teacher to Later Data
Personal Information							
Membership							
Federal Program Participation (EDEN)							
School Program Participation							
School Participation and Activities							
Non-School and Post-School Experiences							
Assessment							
Transportation							
Food Services							
Health Conditions							
Civil Rights Survey Data							

	Access to data in a category for all students in the district or school for whom responsible.
	Access to all data in a category, but only for their students (present or past).
	No access to the data for any students.

Following is a listing of data levels developed by one state education agency.

Levels of Access to Data in the Student Information System

It is useful to think of a single record of an individual student as a folder that contains many pieces of information, such as name, school building number, gender, or date of birth, etc. These are called fields. Every field in the student information system is assigned an access level between 1 and 4, with Level 1 being the highest level. All access levels are assigned in a way that maximizes usage by educators without risking inappropriate disclosure of personally identifiable information.

Level 1 Access allows authorized SEA staff to read and write to all the records and fields in the database. This level is only permitted to a minimal number of authorized staff members who operate or manage the database or are responsible for maintaining the accuracy, security, and audit corrections in the performance of their duties. Authorization by the student record system manager will be required for this level of access.

Level 2 Access places limits on access to individual records but not fields. Specifically, superintendents (or their designees) of local school districts will have read-and-resubmit access to records of their own students. Another way to say this is that a superintendent may see all of the fields (data) collected about any of the students in his or her school district and can direct that data be resubmitted if errors are identified.

Level 3 Access provides school principals (or their designees) with access to data about their students for the current and previous years. This is a proposed function of the system that would allow comparisons of student scores and other data across school years and school districts for use in decision making about instructional improvements. In addition, this level of access would allow principals to obtain information about the performance of their former students who have gone on to postsecondary education, should this arrangement be available.

Level 4 Access gives read-only access to a limited set of fields for all students within the State. The purpose of this level is to allow designated district personnel who are responsible for registering new students to determine a student's ID through use of a student locator system. Information that could help to better place a new student for instruction may be included. This is consistent with FERPA Section 99.31(a)(2).

Some SEA staff responsible for audits, operations, accreditation, and reporting to state and federal government agencies will have access to a limited set of fields, excluding student names. The fields that are available at level 3 will be specified in an appendix once they are identified.

Public read-only access may be made available to the general public, including educational associations, media, real estate agents, businesses, interest groups, etc., to view standard reports and data tables that are produced and published in aggregated formats on the Web. Data on individual students **will not** be accessed by anyone at this read-only level.

It is possible that some of the reports available through public read-only access would be based on a very small population of students or educational personnel, which could reveal information about the individuals in that group. For instance, if a search were done for the math scores of all Asian/Pacific Islanders, and this search revealed two students in a particular building, there would be some certainty that information about an individual could be disclosed. Therefore, the student information system manager will block any aggregate results with a statistical cutoff in which fewer than **ten** students might be disclosed.

Providing Data from the Longitudinal Student Records System

States have moved toward developing longitudinal student records systems because of the need to hold schools and districts accountable for student performance. The *No Child Left Behind Act's* regulations require states to monitor performance of subgroups of students such as those who are economically disadvantaged, limited English proficient, migrant, or homeless. Many of the students fall into more than one of these categories, thus accounting becomes more difficult and duplicative if data are aggregated separately for submission to the state. By having individual student records, a state can "slice and dice" the data anyway that is needed. There may be other subgroups of interest in a state than those required by federal law. Thus, the state's longitudinal student records system provides for aggregating the data needed for federal and state reporting, as well as giving the state an analytical database for identifying problems and successes.

 **ESP Insight**
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Aggregate statistics compiled from the student record system do not necessarily mask the identity of children if the children have unusual characteristics within their schools or districts. If assessment scores are presented by race/ethnicity within a school and there is only one Asian/Pacific Islander in the school, then it is obvious that student received the score reported in that portion (cell) of the table. If there are scores for two students within a cell, then knowing one score would enable a person to figure out the other student's score. Including a minimum of three students in a group (cell) should prevent this type of inappropriate release of information from occurring. Higher minimums increase the number of students that must be known before the value for the final student can be calculated, thus are safer. For more information on selecting appropriate group sizes, see the ESP Solutions Group *Optimal Reference Guide: Confidentiality and Reliability Rules for Reporting Education Data*.


General Recommendations for Protecting the Confidentiality of Education Records Maintained at the State Education Agency

1. Develop a policy statement that describes the purpose of the Student Information Management System, the appropriate usage of individual student data within the state education agency, and conditions for release of data contained within the database. Include information about statutory requirements and expectations for the system.

In general, states that have individual records do not have them to track individual students and make specific decisions about them, although that could be done. Decisions about individual students are usually made at the local level where the students attend school. Decisions made with a state database are focused on groups of students, such as students who are economically disadvantaged, disabled, non-English speakers, migrants, and gifted. Data are used to monitor instructional quality, equity, and achievement. Monitoring progress of students within schools and districts over time is an important use of such databases; so being able to link records from year to year is essential. A unique student identifier is needed to ensure records can be accurately linked from year to year.

The policy statement containing the goal and planned uses of the state database must be provided to the staff of the SEA, and those with access to the database must be aware of restrictions to its use and penalties for misuse. In addition the policy statement should be made available to lawmakers and citizens of the state.

2. Identify all persons within the state education agency who must or will have access to the Student Information Management System. Determine the data elements to which they must or may have access. These persons include:
 - Persons who must have access to the database for monitoring the progress of individual students or for special studies about groups of students.
 - Persons who will have responsibility for monitoring the quality of the student data submitted by Local Education Agencies. These persons may have responsibility for removing individually identifiable information and replacing identifiers with substitutes, merging new data sets with previous data sets, checking for data quality (e.g., data that appear outside of the range of expected data or nonsense data), and consulting with LEAs about the content or quality of their data. These may be technical or program level staff.
 - Persons who must consult with LEAs about the electronic transmission of data. These will be technical persons with the responsibility for helping the LEA staff to transmit the data using secure procedures.
3. Develop a policy statement that specifies the restrictions under which these groups of SEA staff are allowed access to the database and any penalties they may suffer for inappropriate use of the database or release of the data. Make

 **ESP Insight**
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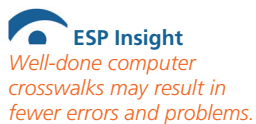
sure that all staff in these positions are trained and knowledgeable about their responsibilities related to confidentiality, their abilities to access and use the data, and the procedures to use if they are asked to perform duties beyond the stated requirements. While not required in federal and state law, staff members can be asked to sign a statement indicating that they:

- acknowledge the purpose, restrictions, and appropriate uses of the database,
 - understand the penalties for misuse and unauthorized disclosure of the data, and
 - agree to the ethical and legal requirements to maintain the confidentiality of the data.
4. Develop a policy statement that specifies what data will be collected and why these data are to be collected. Make sure that any data elements you collect about individual students can be justified from legal and ethical standpoints. In order to identify what data are needed, review the data needs for the state education agency, including federal and state reporting, funds distribution, accreditation, accountability, and any other relevant requirements. Determine which data are best obtained through analysis of individual student education records. Make sure that LEAs understand why the data are needed and how they will be used.
 5. Develop policies and procedures that will help to ensure proper collection of the data at the local and state levels, and that will ensure confidentiality of the data. The policies should be an extension of existing policies at the local level where the data are originally collected. Local Education Agencies are responsible for providing complete data for their students.

Collecting student level data into a centralized database will require a combination of methodologies. School districts with automated student record systems will probably want to download the desired data from their computer files. These districts should have trusted computer programmers who can handle the movement of data from the central database to the state education agency in a confidential manner. SEA staff should work with the district's staff to ensure that proper format crosswalking is accomplished, that data are submitted in the proper order, and that the procedures used require as little re-keying of data as possible. Well-done computer crosswalks may result in fewer errors and problems.

Since many districts still keep data in paper files, the data elements requested by the state education agency will have to be manually entered into a computer file. Guidelines and procedures should be developed that will help these districts determine the best ways to get the data entered into a computer file while maintaining confidentiality. For instance, guidelines should specify who would be appropriate to do data entry. Many schools use students as office assistants. Students should not be used, however, to key in data of other students. Similarly, parent volunteers are not appropriate.

If a district is obtaining a computer specifically for providing the data to the state education agency, suggestions might be made as to what type of



equipment would be needed, where it should be maintained, security measures that might be needed, who should be allowed to use it, etc. For small districts not currently using computers for administrative student record keeping, these suggestions should be welcome.

Some state education agencies have found it useful to develop custom computer software that can be used for entering data into the desired format. In addition, procedures are needed to collect the data via the internet or direct connections. Carefully designed procedures help to ensure that data are comparable and complete, but are also essential to ensure that confidentiality is maintained. If contractors are used to design state databases with student data, these procedures need to be developed collaboratively, with significant input from SEA staff.

 **ESP Insight**
Carefully designed procedures help to ensure that data are comparable and complete, but are also essential to ensure that confidentiality is maintained.

6. Develop procedures that will ensure secure maintenance of student data within the state education agency. Computer access restrictions and procedures are needed to promote data confidentiality. Prohibiting access through the use of passwords, firewalls, and other technical means will help to ensure that only those with a “need to know” can see individually identifiable data. Remind staff members of their responsibility to ensure no one else has access to the database when they leave their desks.

It is crucial to review internal physical access to the computer and develop appropriate security measures. The computer containing the database should be located where unauthorized persons will not have access, and where physical problems or disasters (e.g., broken water pipes, electrical shortages) are not likely to compromise the security of the computer. In addition, measures are needed to prevent theft. Security of the equipment is essential. This is also crucial for data maintained offsite in a contractor’s location.

A major threat to confidentiality is unauthorized access from outside the agency; therefore, another type of security must be considered. When computers can be accessed through direct dial-up modem or Internet access, there is the potential for outside intruders to access and manipulate the data. Outside access must be denied through the use of firewalls, password access, and careful monitoring of computer activity. Removal of basic student identifying information from the database will present a hurdle to unwanted intruders trying to locate specific students’ records.


 **ESP Insight**
A major threat to confidentiality is unauthorized access from outside the agency; therefore, another type of security must be considered.

7. Develop rules and procedures concerning the proper usage and release of student data. Document the policies and procedures for maintaining confidentiality and appropriate usage within the state education agency, and be prepared to make it available to parents, the press, state lawmakers, and others within the public whenever necessary. Not all of the specific procedures need be spelled out for the reader, but a general discussion of policies and procedures can be reassuring to parents and others.

SEAs must develop procedures for allowing parents to have access to the data maintained about their child within the database. Some states have the means to print out a listing of the information about any one child when a parent asks

to see what is there. Other states have districts provide this information to the parents, since the data maintained in the state database is identical to the data maintained at the local level. Even state assessment data can be provided through Local Education Agencies. Providing information through the district is less intrusive and burdensome for the SEA and may be easier for the parent who does not have to travel to the state capital.

Identify a person or office to which all requests for release of information must go. There may be requests from the courts, parents, and certain governmental agencies for individual student data. Some people will call several people within a state education agency trying to get the answer they want, rather than just taking the word of the first person who answers the questions. Because of the confidential nature of the contents of this database, it is important to have a single office responsible for ensuring appropriate maintenance and usage of the database. Unusual requests may require additional assistance from legal staff or the state's Attorney General.

 **ESP Insight**
SEAs should plan ahead for the types of data requests they may receive.

SEAs should plan ahead for the types of data requests they may receive. For instance, state lawmakers and board members may want to obtain access to the database in order to do analyses. One solution is to have SEA staff dedicated to doing these types of analyses in response to requests. A more effective way is to anticipate the types of studies that may be requested and provide report generating capability to persons outside of the agency (and for insiders, too). Still another way to handle requests for access to this rich database is to create a research/public data extract from the statewide database including only those data elements determined to meet criteria set by the SEA relating to confidentiality. Such a data extract would, of necessity, have to have important personally identifiable information removed, such as race/ethnicity, school, or other information that could identify an individual student. Hence the utility of the data extract might be less than desired.

It is most likely that data released from the database will be in an aggregate format at the school or district level. Data might be compiled for groups of students, such as Title I students, transitional bilingual education students, and other groups receiving special services. Assessment scores are generally released as averages, ranges, or numbers of students meeting specific proficiency levels. In general, these data will not be personally identifiable; however they could be. As a result, the SEA must develop a policy relating to the release of statistical data in a confidential manner. Many education agencies set a specific minimum cell size, or number of students for whom averages are reported. As mentioned earlier in this paper, the SEA might choose to require a minimum of three students in a cell for public reporting purposes. If the minimum number is set too high, then useful information may not get reported. Setting a higher minimum number, on the other hand, provides more security that the individual students' data might be discovered. This is an issue with no clear-cut answer. We recommend a minimum of between three and five students per cell for public reporting of sensitive data, such as achievement scores. For use in monitoring quality at individual schools, actual data can be used as long as it is not released to the public.

 **ESP Insight**
We recommend a minimum of between three and five students per cell for public reporting of sensitive data, such as achievement scores.

Specific Recommendations

1. Develop a policy statement that describes the purpose of the Student Information Management System, the appropriate usage of individual student data within the SEA, and conditions for release of data contained within the database. Train all SEA staff on the contents of this statement. Release the statement to lawmakers and citizens of the state.

Make a list of all persons or positions within the SEA who must or will have access to the Student Information Management System and the data elements they may access. Document their roles and responsibilities with regard to the system and maintaining the confidentiality of the contents.

2. Develop a document that can be provided to school, LEAs, and parents containing the listing of what data elements will be collected and when they will be collected if they are to be implemented in phases. Also describe the reasons why the data elements are to be collected and standard reports to be produced. Provide information about how access to the data elements will be restricted.
3. Develop and document procedures to limit access to the central student database to only those persons identified as having a need to know. Assign special passwords to those who can access the data. Develop a system that will log when and by whom the database is accessed and changes to the database are made.
4. With the help of LEAs, develop procedures for allowing parents to have access to the data maintained about their children in the state database. Design a form that parents complete to request access to their child's record. Verify by photo identification that the parents are who they say they are or have the district do this. Arrange for parents to receive a copy of the contents of their child's state record from the local education agency where the student attends. Make sure that LEAs have a copy of all information kept in the state database about their students, including state assessment data. Designate a person or office in the SEA to receive the requests and arrange for the information to be shared with the parents in the LEA.
5. Develop a set of "canned" reports that can be run on the database to produce the types of studies that most frequently will be requested. Determine who within the SEA can run reports, and whether or not anyone from outside of the agency will be allowed to run the reports.
6. Establish standards for the release of data from the database. Specifically, make sure that there are no fewer than three students in a group for which data will be reported. Review statistical reports carefully to determine if the data being released in different reports could together be used to identify data about individual students.
7. Develop procedures for sharing student data with researchers, contractors or other organizations, such as a state higher education agency. Develop

documentation that ensures that persons gaining access to student records are knowledgeable about restrictions on inappropriate disclosure of student data and the means needed to ensure confidentiality and security.

Summary

Restricting access to individual students' records is important whether the data are maintained at the classroom, school, district, state, or federal level. The development of a set of detailed and carefully crafted policies and procedures at the state education agency level will help to avoid improper disclosures where the data are maintained and alleviate the concerns of parents, students and the public as a whole. These policies and procedures should refer to who has access to the data, what data will be maintained, what are the uses of the data, and what will be done to ensure secure data collection and maintenance.

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ESP Optimal Reference Guide:

Confidentiality and Reliability Rules for Reporting Education Data

Foreword

By Glynn D. Ligon

Districts and states are responsible for protecting the confidentiality of personally reliable information about individuals whenever data are reported publicly. They are also charged both professionally and legally with determining the reliability of the data published. This is not new; FERPA has been around since 1974. Hays published the second edition of his statistics textbook the year before. The No Child Left Behind Act dusted them off and moved them to the top of everyone's "must read" list.

This resource guide talks a lot about the No Child Left Behind Act and adequate yearly progress, but every time a district or state reports data, these same issues apply. So, please do not think this document is only for AYP reporting; however, the time is here to revisit AYP decisions made related to confidentiality and reliability. Real data are in hand now to evaluate decision rules.

We are struggling with the tension between masking data that reveal personally identifiable information and preserving the integrity of our accountability systems by including all students. There is also the tension to preserve the integrity of our accountability systems by reporting only statistically reliable data. Now enter the statisticians with textbooks in hand and arcane ideas of how to apply statistics to today's accountability reports. What we need is thoughtful politimetrics to replace traditional psychometrics and statistics. The new politimetrics will help us implement accountability systems that work for today's schools and students. Politimetrics will merge the political mandates and realities with the appropriate statistical methodologies.

Using the context of today's schools rather than a research university, this resource guide pushes back on traditional sampling theory as the best way to determine reliability. This guide also proposes alternative reporting methods for protecting the confidentiality of individuals in small groups without losing all the information we have about those groups.

I began studying confidentiality and reliability issues without a full appreciation for their complexities. I thought education agencies would be able to select two reasonable numbers, say 5 for confidentiality and 30 for reliability, and move on to other priorities. Now I know that 5 as a minimum for confidentiality may work well, but any single number for statistical reliability has problems. Some proponents of sampling-based methods think my recommendation to use standard error of measurement (SEM) in a significance test for reliability is off-base. I think the case for SEM with the No Child Left Behind Act is compelling. This publication should help you form or reinforce your own conclusion.

 **ESP Insight**
The new politimetrics will help us implement accountability systems that work for today's schools and students.

These are significant issues for the success of an accountability plan. Please feel welcome to contact us for additional help and advice related to confidentiality, reliability, or other related issues.

The following persons also contributed to the contents of this document:
Vince Paredes, Ph.D., Judy Jennings, Ph.D., and Evangelina Mangino, Ph.D.

The concepts discussed in this paper are as important now as they were in 2005 when the paper was published. Reporting student data requires careful consideration of groupings of students such that individual students cannot be identified, as required by the Family Educational Rights and Privacy Act (FERPA). The U.S. Department of Education (USED) published proposed revisions for implementation of FERPA in March 2008. These proposed revisions reinforced the importance of ensuring that policies and procedures are in place to prevent individually identifiable information about students from being disclosed to inappropriate people. The proposed revisions discuss de-identification of student records and other methods used to ensure non-disclosure. This paper provides specific guidelines for meeting the requirements of FERPA.

Introduction

Each state set a minimum number of students before disaggregating subgroups in response to accountability and reporting requirements of No Child Left Behind. School districts have also established local rules before publishing reports about student performance. These minimums ensure that no individual student's information will be revealed publicly and that no disaggregated subgroup will be too small for their results to be statistically reliable.

n = number: In this publication, n is used to designate a number selected as the minimum for confidentiality or statistical reliability.

No Child Left Behind does not require a traditional accountability system. Quite to the contrary. The system detailed by No Child Left Behind was not already implemented by any state (including Texas). So should statisticians be applying traditional methods to No Child Left Behind issues? No.

- No Child Left Behind does not allow schools to meet adequate yearly progress (AYP) objectives by averaging student scores in reading, mathematics, and science. A great score by one student cannot average out a poor score by another.
- No Child Left Behind looks at every single student. The requirement is that every single student reaches proficiency. Improving America's Schools Act, the predecessor to No Child Left Behind, introduced this perspective.
- Even the uniform averaging procedures of combining across grade levels or across school years is mathematically equivalent to combining students into a common pool to be counted together.
- However, this requirement to count individual students rather than to average scores across students contrasted with many currently implemented state accountability systems that did use averages.

No Child Left Behind created a new accountability system for all of the nation's schools. The *Improving America's Schools Act* provided a system of accountability only for Title I schools. No Child Left Behind expands accountability to be a unified system for all schools. Each state's rules were revisited, and the interpretations of them updated. Each state determined how to achieve continuity and transition from



The confidentiality conundrum: If two's company, and three's a crowd, can we pick a student out of a crowd?



The statistical reliability conundrum: How many students must be tested for us to know anything significant about them?

their old to their new system. The central concept of AYP is precisely described and formulated in the law.

Simple answers based upon adopted minimum numbers of students appear to be described by No Child Left Behind. "The 95% requirement... disaggregation... inclusion in an annual report card... shall not be required in a case in which the *number* of students in a category is insufficient to yield statistically reliable information or the results would reveal personally identifiable information about an individual student."

Statisticians and policy decision makers must explore all the ramifications, assumptions, and implications beyond simple numbers for every alternative. The implementation of No Child Left Behind required the psychometricians and statisticians to work with the politicians and policy makers to devise and adopt methods that are both theoretically sound and politically practical. In discussing these issues, we "invented" the word politimetrics, only to find that the concept as well as the actual term has been in use since at least the 1970's. Politimetrics (Gurr, 1972; Alker, 1975; Hilton, 1976), the accommodation of psychometrics to the political world, is required by No Child Left Behind. Politimetrics describes the dynamics when politicians must rely upon statisticians to devise defensible methodologies. The statisticians are then challenged to present and explain their solutions in a political context. What works in educational research for a professional journal may make little sense in the real world of schools, state government, and federal mandates. The classic example is the impossibility of randomly assigning students to schools for a research study of school effectiveness. This Byzantine example of random assignment is similar to what some statistical techniques assume happens in the real world.

No Child Left Behind and the realities of its 12-year accountability cycle depart from traditional psychometric and statistical techniques. Principals think of their individual schools as unique. With about 90,000 schools, potentially over 7 million subgroups being measured, and all this over a 12-year cycle (that is 84 million subgroups in all), just about every conceivable combination of statistics and unique distributions of assessment scores may be observed. That is why states must test theories both in simulations and with their actual data from the first years of AYP. States must understand the implications for alternative decisions on a wide range of score distributions. States must be cautious in accepting methods that neatly accommodate 99% of the schools and subgroups. After all, that other 1% would be 900 schools and 840,000 subgroups as exceptions.

AYP as required by No Child Left Behind is **NOT**:

- A value-added model that measures how much a school has accomplished based upon a student's starting point, demographics, or resources assigned.
- The measurement of AYP is not a regression formula that accounts for these variables to predict an expected performance level.
- A comparable-schools model that identifies schools of similar characteristics and compares relative performance.

- A best-practice model that finds high-performing schools and uses them as benchmarks for measuring others.
- A normative model that ranks schools and divides them into quartiles based upon performance.
- A gains model that measures a school's improvement in performance across years.
- A gains model that measures an individual student's improvement.
- A gains model that compares one year's performance in a grade to the next year's performance in the next higher grade level.
- A level-playing field model that adjusts each school's objectives according to the students or resources available.

In short, No Child Left Behind's AYP model is not any of these. Simply put, AYP requires every subgroup in a school to meet an annual objective set for each of multiple indicators. The objective is the same for all schools in a state. Specifically, No Child Left Behind requires that the objective be the same for Title I and all other schools within a state. This is a true standards-based model. Each SEA defines its standards; establishes performance benchmarks for them; measures current student performance; and sets incremental annual objectives that require each school, district, and state to "make progress" toward reaching 100% of the students in each subgroup performing at or above the performance benchmark (e.g., "proficient" on an assessment). "Make progress" is somewhat of a misnomer. A high performing school may already exceed the annual objectives set for the next five years.

No real progress would be required to meet the annual AYP standard—until that sixth year. The concept of progress is in the characteristic of the annual objectives, which continue to rise until they reach 100%. So a school that meets the annual objective right on the money each year would be making steady progress. However, the annual objective is stated in terms of an absolute performance in each year, not a gain in performance from the prior year.

Two issues must be resolved by each state in order to implement their accountability plan. These same two issues face districts whenever performance reports are published.

1. When are there too few students in a subgroup to allow disaggregation that will not reveal personally identifiable information for individual students?
2. When are there enough students in a subgroup to yield a statistically reliable measure of the subgroup's performance toward meeting the annual objective established for adequate yearly progress?

Neither of these issues is simple. The suppressed disaggregated values for one subgroup might be derived from the values published for other subgroups. A larger subgroup's value may be more statistically reliable than a smaller subgroup's. Therefore, these complexities are weighed in the guidance provided in this publication.



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The Law – No Child Left Behind

No Child Left Behind says:

(C) DEFINITION-Adequate Yearly Progress shall be defined by a State in a manner that—

- (i) applies the same high standards of academic achievement to all public elementary and secondary school students in the State;
- (ii) is statistically valid and reliable;
- (iii) results in continuous and substantial academic improvement for all students;
- (iv) measures the progress of public elementary schools, secondary schools and local education agencies and the State based primarily on the academic assessments described in paragraph (3);
- (v) includes separate measurable annual objectives for continuous and substantial improvement for each of the following:
 - (I) The achievement of all public elementary school and secondary school students.
 - (II) The achievement of—
 - (aa) economically disadvantaged students;
 - (bb) students from major racial and ethnic groups;
 - (cc) students with disabilities; and
 - (dd) students with limited English proficiency; except that disaggregation of data under subclause (II) shall not be required in a case in which the number of students in a category is insufficient to yield statistically reliable information or the results would reveal personally identifiable information about an individual student

States must establish rules for:

- The smallest number of students in a subgroup (e.g., category) that can be disaggregated *without revealing personally identifiable information about an individual student*
- The smallest number of students in a subgroup (e.g., category) that can be disaggregated *and yield statistically reliable information*

Definitions

- **Adequate Yearly Progress (AYP):** Meeting the annual objectives for each indicator, grade level, and subgroup in a year
- **Annual Objective (AO):** The percent of students that must meet the criterion for proficiency on an assessment (or additional indicator); increases annually from the starting point to 100% in 12 years for assessments
- **Confidentiality:** Inability to determine from the subgroup values reported how an individual student performed on an indicator
- **Cut-Point:** The score that divides proficiency levels, e.g., the lowest assessment score that classifies a student as proficient rather than basic
- **Error:** The amount that a score or a measure derived from a group of scores varies across either measurement times or samples (Statisticians use error to refer to the imprecision of their tests and statistics. Error in this context does not equate to mistakes)
- **Indicator:** An assessment, graduation rate, or other measure of academic achievement
- ***n*:** The number of students in a subgroup
- **Null Hypothesis:** For a subgroup that does not meet the annual objective, there is no difference between the observed distribution of scores and a distribution that would meet the annual objective; therefore, the subgroup's results are unreliable
- **One-Tailed Test:** Directional hypothesis that tests that one value is larger than another, contrasted with a two-tailed test that tests whether the two values are different in either direction
- **P-Value:** The probability that the hypothesis is true (e.g., $p = .05$ means that the probability that the null hypothesis is true is only 5%; or that the probability that a directional hypothesis is true is 95%)
- **Standard Error of Measurement (SEM):** Range in which a student's score might vary if tested multiple times; plus or minus one SEM represents the range within which a student's observed score would vary around the student's true score 68% of the time; 32% of the time, the student's observed score would be farther away from the true score
 - **Test - Retest:** The SEM is determined by testing the same individuals multiple times
 - **Internal Consistency:** The SEM is determined by correlating individual item values with other items and derived scores
- **Starting Point:** The percent of students meeting the criterion for proficiency in the first year of No Child Left Behind

- **Statistical Reliability:** The degree of confidence associated with the decision of whether or not enough students in a subgroup performed above the cut point for proficiency to meet the annual objective
- **Subgroup:** A category of students as defined by No Child Left Behind for AYP (e.g., each race/ethnic group, economically disadvantaged, limited-English proficient, and children with disabilities with an IEP) or annual report cards (gender and migrant)
- **Type 1 Error:** Rejecting the hypothesis when it is really true (i.e., the subgroup is considered to have not met the annual objective when it actually has)
- **Type 2 Error:** Accepting the hypothesis when it is really false (i.e., the subgroup is considered to be statistically unreliable when it actually did not meet the annual objective)

Dynamics

Several AYP dynamics are evident among the factors related to decision rules for confidentiality and statistical reliability.

- The more subgroups that are disaggregated, the more subgroups that fail to meet an annual objective, and the more schools that fail to make adequate yearly progress (AYP) and are classified as in need of improvement (INOI).
- The higher the minimum n for confidentiality is set, the fewer subgroups that are disaggregated.
- The higher the minimum n for statistical reliability is set, the fewer subgroups that are disaggregated.
- If a statistical test is used for groups above the minimum n , fewer subgroups will be disaggregated because more will be classified as statistically unreliable.
- A one-tailed statistical test will identify more subgroups as statistically reliable than a two-tailed test with the same P -value.
- The smaller the p -value required for statistical significance, the fewer subgroups will be identified as statistically reliable.

 **ESP Insight**
*Without the same decision
rules being used,
comparability across states
will be elusive.*

Another way to think about these dynamics is to consider the decisions that would minimize the number of subgroups that are disaggregated—resulting in fewer schools being identified as in INOI.

Fewer schools are identified as INOI when:

- A larger n is adopted for confidentiality.
- A larger n is adopted for statistical reliability.
- A statistical significance test is used to determine the probability that a subgroup met an annual objective.
- The statistical test uses a two-tailed (non-directional) hypothesis.
- A lower p -value (e.g., .01 rather than .1) is used.

Two contrasting sets of rules illustrate these dynamics.

- **The maximum number of schools is identified as INOI when these are adapted:**
 - a. Small minimum n for confidentiality
 - b. Small minimum n for statistical reliability
 - c. No statistical significance test
- **The minimal number of schools is identified as INOI when these are adapted:**
 - a. Large minimum n for confidentiality
 - b. Large minimum n for statistical reliability
 - c. Statistical significance test for subgroups larger than the minimum n
 - Two-tailed test
 - $p < .01$

Hypotheses and Tails

The dynamics described above use the following hypotheses and significance tests.

Annual Objective: A percent of students that must perform at or above the proficient level for the subgroup to meet AYP.

p-Value: The probability that the subgroup's percent proficient and advanced and the annual objective are the same (null hypothesis) or that the annual objective is greater than the subgroup's percent proficient and advanced (directional hypothesis). If $p = .01$, then the probability that the hypothesis is true is 1 %.

Statistical Significance

The table that follows clarifies how the type of hypothesis and one- or two-tailed test aligns with the wording of the question being answered. The decision to accept or reject the hypothesis is matched with the conditions for acceptance or rejection and the meaning of that decision.

Table 1: Hypothesis Wording Alignment

Type	Wording	Decision	Conditions	Meaning
Null Hypothesis	For Subgroup Status: Met or Not Met	Accept	The calculated p -value is greater than the criterion p -value. (Example: $p = .45$; criterion = .05)	The subgroup's percent proficient and advanced is probably the same as the annual objective. The subgroup's performance is statistically unreliable.
	The subgroup's percent proficient and advanced is the same as the annual objective (i.e., equal to or higher).	Reject	The calculated p -value is less than the criterion p -value. (Example: $p = .04$; criterion = .05)	The subgroup's percent proficient and advanced is probably different from the annual objective. The subgroup's performance is statistically reliable.
Directional Hypothesis	For Subgroup Status: Met	Accept	The calculated p -value is less than the criterion p -value. (Example: $p = .04$; criterion = .05)	The subgroup's percent proficient and advanced is probably higher than the annual objective. The subgroup's performance is met, statistically reliable.
	The subgroup's percent proficient and advanced is equal to or greater than the annual objective.	Reject	The calculated p -value is greater than the criterion p -value. (Example: $p = .45$; criterion = .05)	The subgroup's percent proficient and advanced is probably not higher than the annual objective. The subgroup's performance is statistically unreliable.
	For Subgroup Status: Not Met	Accept	The calculated p -value is greater than the criterion p -value. (Example: $p = .45$; criterion = .05)	The subgroup's percent proficient and advanced is probably not lower than the annual objective. The subgroup's performance is statistically unreliable.
	The subgroup's percent proficient and advanced is equal to or greater than the annual objective.	Reject	The calculated p -value is less than the criterion p -value. (Example: $p = .04$; criterion = .05)	The subgroup's percent proficient and advanced is probably lower than the annual objective. The subgroup's performance is not met, statistically reliable.

The p -value represents the level of confidence the state requires for its determination of met or not met related to a subgroup's performance on an annual objective. Where the p -value is set makes a difference in the risk of making type 1 or type 2 errors. In other words, an unacceptable number of failing subgroups can be unreported for being statistically unreliable if the probability (p -value) required to reject the null hypothesis or accept a directional hypothesis is very low. Researchers often use .01, .05, or .1. For a state, the decision related to poorly performing subgroups is whether to:



- Select a low p-value such as .01 and risk excluding from AYP too many subgroups because their percent below proficient is determined to be statistically unreliable (type 1 error),

OR

- Select a high p-value such as .1 and risk including in AYP too many subgroups because their percent below proficient is determined to be statistically reliable (type 2 error).

Generally the discussion among states has been that the second risk is the one to avoid. States would prefer to identify fewer low-performing schools than identify some that may not be low-performing. Therefore, selecting a lower p-value would be desirable. States must find a balance between protecting the schools from unfair identification and protecting the students in schools in need of improvement.

This is an important decision. The nature of statistical significance tests is such that the selection of the p-value could impact the number of subgroups designated as statistically unreliable just as much or more than the setting of a minimum n for reporting or setting of the nSEM as described in the alternatives provided.

Which Decision Rule Should a State Adopt First?

Should a state determine one of these two decision rules first? There does not appear to be a necessary sequence. Even though one may override the other in practice, both the confidentiality and reliability decisions must be made.

At What Level Do We Count Students for Confidentiality?

The minimum subgroup size to protect confidentiality should be applied to the whole subgroup, not to the number of students performing at each proficiency level.

What happens when a subgroup has enough students to meet the state's criterion for confidentiality, but when the students' performance is reported, there is a level (e.g., basic, or proficient/advanced) that contains fewer students than the criterion for confidentiality?

For example, there are 10 economically disadvantaged students with third-grade math scores. The state's minimum n for reporting is five, so the subgroup gets reported—or does it? What if there are only two students at the basic level? Does this subgroup then get eliminated from the AYP calculations? No. The subgroup should be disaggregated for AYP, but the distribution of the scores by proficiency level would be masked in public reporting. Reporting them publicly is part of the annual report card requirements. The report card reporting requirements specify what has to be disaggregated publicly. So a group can be included in AYP calculations but reported in the annual report card using the method for reporting ranges rather than actual values as described in the section titled **"Confidentiality n."**

If this were not the case, then self-defeating conditions would apply. For example, whenever a subgroup has fewer than n students performing either at the basic level or proficient/advanced, the group would be eliminated from consideration for AYP. Thus, subgroups that approach 100% proficiency would not be included as fewer than n students are left at the basic level. Poorly performing schools could escape inclusion as long as fewer than n students reached proficiency.

Related Issues

- A. Higher Standards for Small Schools and Subgroups:** Reality is that a small subgroup must have 100% of its students at or above proficient in order to meet lower annual objectives. In other words, a group of five students must have 100% or all five students at or above proficiency to meet an annual objective of 81%. Table 2 shows the points at which small groups of various sizes reach the 100% level.


 **ESP Insight**
Reality is that a small subgroup must have 100% of its students at or above proficient in order to meet lower annual objectives.

Table 2: Point at Which 100% Becomes the Criterion for Meeting Annual Objectives for Small Subgroups

Students in Subgroup	3	4	5	6	7	8	9	10	15	20	25-33	34-49	50-99	≥ 100
Annual Objective that Requires 100% Proficient or Advanced	67%	76%	81%	84%	86%	88%	89%	91%	94%	96%	97%	98%	99%	100%

- B. Impact of 95% Inclusion Rule on Small Schools and Subgroups:** AYP requires that 95% of the eligible students within a subgroup be included in an assessment. In support of 20 as a minimum for statistical reliability, a subgroup of fewer than 20 students must have 100% inclusion on an assessment in order to meet the 95% standard. This places schools with smaller subgroups at risk of failing to meet AYP by virtue of a less than perfect participation rate. Although not technically a reliability issue, if subgroups smaller than 20 students are held to the 95% standard for participation, a single student untested will cause the subgroup and the entire school to fail to meet AYP.

- C. Sequence for Applying 95% and n Rules:** The sequence for applying the various rules is crucial. (This is different from the sequence for adopting the rules.) Logically, they should be in this order.

1. Determine that the minimum n for confidentiality is met. If this criterion is not met, then the subgroup is excluded from any disaggregation.
2. Determine that the results for the subgroup are statistically reliable.
3. Determine that 95% of each subgroup was included in the assessment. If this criterion is not met, then the subgroup fails the annual objective—regardless of the percent of students performing at or above proficiency.

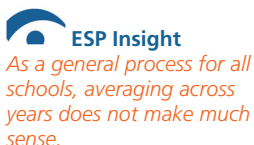
 **ESP Insight**
A subgroup of fewer than 20 students must have 100% inclusion on an assessment in order to meet the 95% standard.

Why does the 95% rule come last? Consider a subgroup of 20 students. If only 18 (90%) are assessed, then the subgroup would fail. However, if this subgroup with 18 scores is first compared to a minimum for statistical reliability of 20, then it would be categorized as unreliable—not as failing. In another example, if four out of five students are assessed (only 80%) and the subgroup is first compared to a minimum for confidentiality of 5, then the subgroup would be suppressed rather than failed for not including 95% of the students.

- D. Students Not Tested:** What is to be done with the less than 5% of the students who are not tested? What is the denominator for this calculation? Do these students get included in the determination of the starting point and subsequently in the calculation of AYP each year? Some states consider these students as not being proficient or advanced. In the short-term, counting these students as not having met proficiency has little impact other than on an individual school with a preponderance of students not tested. In the long-term, for a school to meet the 100% annual objective in the 12th year, not only would all students tested have to perform at the proficient level, but there could be no students untested.
- E. Uniform Averaging Procedure—Across Years:** No Child Left Behind allows for combining across the most recent two or three years to determine if the annual objectives are met. There is no specification whether this is to be a weighted average (adjusted for the number of students in the subgroup each year) or whether each year counts equally. The most logical approach may be to combine the counts of all students over the years into one group and calculate the percent proficient or advanced. This is not an average, but is equivalent to a weighted average. The uniform averaging procedure across years would increase the number of students in a subgroup and may allow for use of more subgroups in AYP. Could a state include in its plan the use of averaging across years as a method only for increasing the size of subgroups?

As a general process for all schools, averaging across years does not make much sense. Assuming that schools are improving across time, this averaging would always have a depressing effect on a school's percent proficient and advanced. In fact, in order to meet the year 12 objective of 100%, a school would need to have already been at 100% for two or three years. Therefore this provision in effect shortens the number of years in which a school must reach 100%.

This provision makes sense as a safe harbor. As such, minor changes in a school's student population or other factors that might lower its performance slightly for a year might not cause the school to be in need of improvement. The inclusion of this option under the uniform averaging procedure section appears to indicate that this would have to be adopted by a state as the general process used for AYP—rather than using this option as another safe harbor provision and applying it only to schools already determined not to have met an annual objective. However, a state might propose this as a safe harbor provision and seek approval of the U.S. Department of Education for this interpretation.



If averaging across years is used as a safe harbor, then it would apply only to schools already meeting the minimums for confidentiality and statistical reliability, because those would be prerequisites to not meeting an annual objective. Thus, prior years' students would not be counted toward either minimum.

- F. Decrease in the Percent Performing at the Basic Level:** No Child Left Behind allows for calculating the decrease in the percent of students in a subgroup who perform at the basic level if the annual objective is not met in the most recent year. If this percent decreases by 10%, then AYP is met for this subgroup. This raises the issue of whether the prior year's percent must meet both the minimums for confidentiality and statistical reliability to be used. A state's plan should describe the process to be used.
- G. Report Cards versus AYP:** Might a state adopt different rules for confidentiality and statistical reliability for the annual report cards and for AYP? For example, might a state disaggregate on the report card a subgroup that is large enough to protect the confidentiality of the students but has been determined to be statistically unreliable for AYP? No Child Left Behind uses the same wording for AYP and the annual report cards. Even though statistically unreliable for AYP purposes, the value of a subgroup is actual and may be of interest to someone in the public. In reference to report cards and public reporting, No Child Left Behind says that "disaggregation shall not be required in a case in which the number of students in a category is insufficient to yield statistically reliable information or the results would reveal personally identifiable information about an individual student." Although not required, a state's plan apparently could provide for the reporting of subgroups in the annual report card that were considered statistically unreliable for AYP. Alternatively, there does not appear to be a requirement that the rules for confidentiality and statistical reliability be the same for AYP and the report cards.
- H. Alternative Academic Indicators:** Do the rules for confidentiality and statistical reliability apply equally to the alternative indicators that are not assessments? These indicators may include, but not be limited to, graduation rate; decreases in grade-to-grade retention rates; attendance rates; and changes in the percentage of students completing gifted and talented, advanced placement, and college reparatory courses. No Child Left Behind does not address this issue directly, but only references the assessment indicators when discussing statistical reliability and the 95% inclusion rule. These are counts of real events without the same type of measurement error associated with assessments. Errors in counting or reporting these statistics are certainly not sampling errors or measurement errors with a known variance. They are mistakes of unknown frequency or probability. We do not offer a rationale for selecting a method of calculating statistical reliability for these counts other than making a professional judgment with defensible face validity. One such judgment would be to apply the same confidentiality minimum n , and to accept the logic that these are counts of clear events/students; therefore, no statistical reliability calculation is required. Guidance from the U.S. Department of Education has indicated agreement with this perspective.



A state's plan could provide for the reporting of subgroups in the annual report card that were considered statistically unreliable for AYP.



There does not appear to be a requirement that the rules for confidentiality and statistical reliability be the same for AYP and the report cards.

- I. **Rounding:** If the annual objective is 75%, has a school with 74.5% proficient or advanced met the annual objective? In science, a threshold is the point at which something occurs. Nothing occurs below that point, and something always occurs above that point. There is no rounding. The point here is that the threshold for meeting the annual objective must be clearly defined by the state—whether that point is 74.5% or 75%. Then there should be no additional rounding.

The same applies to the determination of a 10% reduction in the percent of students at the basic level when that safe harbor provision is used. The state must determine exactly whether the reduction must be 9.5% or 10.0%. Ten percent may not be a whole student. Out of 22 students, 10% is 2.2. Will the state accept a reduction of 2 students, which is 9.09%? Because the number of students may vary from one year to the next, the percent is the reasonable number to use rather than a count of students.

A second rounding issue is whether the annual objectives will be expressed as whole numbers or will be expressed with decimal places.

- J. **Highly Qualified Teachers:** Highly qualified teachers are not part of AYP. However, the issue arises as to whether or not the confidentiality of teachers should be protected the same as that of students. This is most likely an issue that must be answered by each state based upon the applicable state laws. As public employees, certain aspects of teachers' qualifications and assignments may be public. Statistical reliability does not apply to the reporting of highly qualified teacher data.

- K. **LEP and IEP Catch 22:** As students develop their English skills, they leave LEP status. Students in some disability categories exit services as they improve. The impact is that the most successful students are removed from these subgroups each year and are replaced by others that are less successful. Therefore, the "Catch 22" becomes that schools that are successful with these subgroups are denied the inclusion of the scores for their most successful students. Could states consider including the scores of IEP and LEP students for at least one year after they exit from services?

- L. **Students in Multiple Subgroups:** An artifact of AYP is that every student is in at least one subgroup and the total group, and some students are in many more. For example, an economically disadvantaged, Hispanic, LEP, special education student is in four subgroups plus the total group. This may not affect decisions about minimum subgroup sizes, but it does influence how states, districts, and schools think about individual students. If the student in this example performs at the basic level, then the status of meeting the annual objective is at risk for four subgroups and the total. If this student does not participate in the assessment, then all groups risk falling below the 95% participation criterion. These multiple subgroup students can be of considerable influence in a small school or in a school in which several subgroups are small.

 **ESP Insight**
The most successful students are removed from the LEP and IEP subgroups each year and replaced with less successful students.

Because AYP treats the subgroups separately—each receiving an independent determination of meeting the annual objective—the determinations of confidentiality and statistical reliability appear to be independent for the subgroups even though they share the same students.

M. Attention to the Reliability of State Assessments: The statistical reliability demands of AYP place considerable attention on the SEM/reliability of a state's assessments. A well-designed criterion-referenced assessment will have a preponderance of items with a 50/50 difficulty level ($p = .5$) for students performing near the criterion. This maximizes the precision of measurement at the critical cut point. Unfortunately, it also can lessen the precision of decisions at other cut points such as between proficient and advanced. The solution is to also have a large number of items around that cut point. The overall length of the assessment then becomes an issue. State assessments will be exposed to more scrutiny of these issues than may have been directed at them in the past.

The Future Gets Even More Intriguing.

We should begin to imagine what will happen as we approach year 12 in the long-term cycle of No Child Left Behind.

- Schools that meet the final annual objective of 100% of their students performing at or above the proficient level would not be permitted under FERPA's most restrictive interpretations to publish that success.
- Schools that approach 100% proficiency may find that statistical reliability will be very difficult to achieve.

In other words, a conundrum emerges. When schools meet their goals, we may not be able to credit them with that success. As statisticians, when the schools match their goal, we will have met our match as well. Recent FERPA guidance has softened on the issue of suppressing "good news." If 100% do well, that may be reported.



If FERPA is applied too rigorously, then when schools meet their goals, we may not be able to credit them with that success.


Small n Decision Rubric

Setting the Minimum n for Confidentiality & Reliability

What criteria should a state use when selecting a minimum for confidentiality and statistical reliability?

The “Small n Decision Rubric” is a wizard-like flow chart designed to guide a state in establishing the decision rules for protecting confidentiality and establishing statistical reliability. The rubric should be used with the “Decision Template” that outlines the impact and considerations associated with n ’s of various sizes. The sections titled “Confidentiality n ” and “Reliability n ” provide details about these issues.

1. What is the minimum n that protects the confidentiality of individual students? *Three students have degrees of freedom of 2; five students protect against someone who knows up to three students’ scores.*
2. What number represents the point above which there is little benefit in reliability from adding more students? In other words, at what point does the gain in reliability from having more students in a subgroup decelerate or start to level off? *Generally, the rule of thumb in statistics has been that the probability tables begin to flatten at about 30 subjects.*
3. What number is so high that an unacceptable number of subgroups would be excluded from AYP? *The higher the minimum n , the fewer subgroups will be disaggregated and reported. The fewer the subgroups, the fewer the schools that will be classified as in need of improvement (INOI). However, the validity of the accountability system is jeopardized if too many subgroups and too many schools are excluded because they are too small.*
4. What number is fair to small groups having to meet the 100% participation rate for assessments? *The 95% participation rate requirement becomes 100% for a subgroup smaller than 20 students.*
5. What number is fair to small groups when the annual objectives reach 80%, 90%, or higher? *An annual objective of 95% becomes 100% for a subgroup smaller than 20; 90% becomes 100% for a subgroup smaller than 10.*
6. At what point is a small subgroup unlikely to achieve statistical reliability regardless of its performance? *Other than subgroups with 100% performance at the same level, subgroups around five are unlikely to be statistically reliable.*
7. Is there a number below which a subgroup should not be judged even if all its students perform at the basic level? This is a judgment call based upon political or community consensus.

 **ESP Insight**
These 13 steps will produce a defensible decision rule for confidentiality and reliability.

8. Is one of these issues so important that it should determine the final number?
9. What is the minimum number below which a subgroup should be excluded from AYP—based upon the considerations above?
10. Should subgroups larger than this minimum number be tested to ensure their results are statistically reliable? In other words, should a statistical test be run to establish the actual probability that a subgroup's performance is different from the annual objective, or should the results for all subgroups above the minimum number of students be accepted as statistically reliable?
11. Is there a size above which no test should be run? Is there a number of students that is sufficient to provide statistical reliability without a test being run?
12. If the answer to #10 is "Yes," what test of statistical reliability will be used? See "Reliability n " for details describing alternatives.
13. What level of confidence will be accepted for statistical reliability (e.g., $p = .1$)? Is this a directional hypothesis (for instance, yes, e.g., the observed value is greater than the annual objective = one-tailed test; no, e.g., the observed value and the annual objective are equal = two-tailed test)? See "Reliability n " for details describing alternatives.

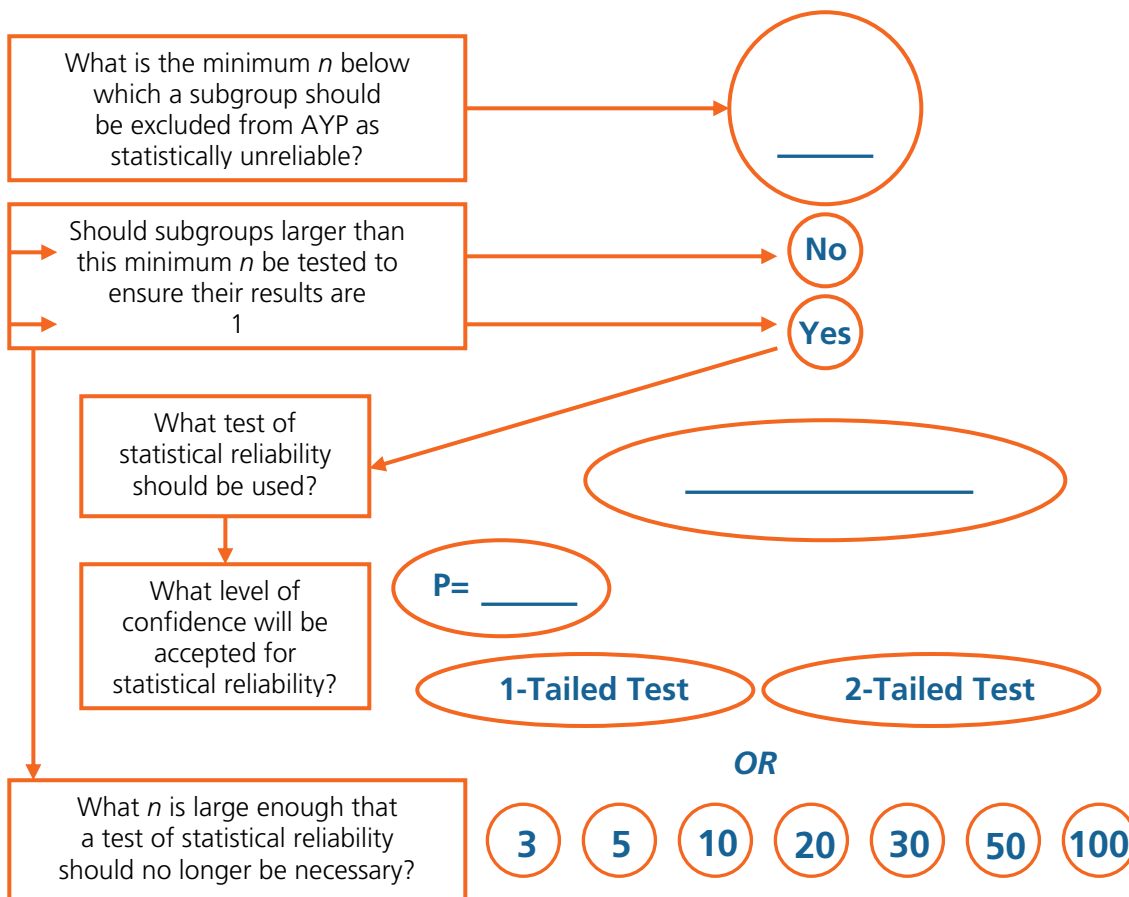
The resulting decision rules can be summarized by filling in the following statements.

Decision Rules:

1. Confidentiality: Do not disaggregate subgroups smaller than _____.
2. Statistical Reliability:
3. Do not disaggregate subgroups smaller than _____.
 - a. Use (name of statistical test), $p =$ (level of probability),
 - b. (one- or two-) tailed test to determine reliability of larger subgroups.
 - c. Do not test for reliability of subgroups larger than _____.

Decision Rubric

Figures 1 & 2: Decision Rubric								
1	What is the minimum n for protecting confidentiality?	3	5	10	20	30	50	100
2	What n is at the point where the gain in reliability from having more students levels off?	3	5	10	20	30	50	100
3	What n is so high that an unacceptable number of subgroups will be excluded from AYP?	3	5	10	20	30	50	100
4	What n is fair to small subgroups in meeting the 95% participation requirement?	3	5	10	20	30	50	100
5	What n is fair to small subgroups when the annual objectives reach 80% or higher?	3	5	10	20	30	50	100
6	At what n is a small subgroup unlikely to achieve statistical reliability regardless of its performance?	3	5	10	20	30	50	100
7	Is there an n below which the state does not wish to judge a subgroup regardless of its performance?	3	5	10	20	30	50	100
Is one of these issues so important that it should determine the minimum n ?		1	2	3	4	5	6	7



Decision Rules:

1. Confidentiality: Do not disaggregate subgroups smaller than _____.

2. Statistical Reliability:

- Do not disaggregate subgroups smaller than _____.
- Use , $p=$, -tailed test to determined reliability of larger subgroups.
- Do not test reliability of subgroups larger than _____.

Decision Template

Number of Students in a Subgroup	Confidentiality		Number of Students in a Subgroup	Statistical Reliability
	Impact	Comment		Impact
3	The maximum number of subgroups will be disaggregated.	Degrees of freedom = 2; statistically 3 is the smallest number that protects individual identities.	3	Decisions will have a high degree of unreliability. Exception: if all students scored more than $nSEM$ from the cut point.
5	Exclusion of subgroups from disaggregation remains minimal; more are included in AYP.	Protects against someone knowing more than one student in a subgroup (e.g., twins, triplets, friends).	5	
10	Exclusion of subgroups from disaggregation increases significantly as this number increases.	All sizes above 5 add decreasing additional protection at the expense of sacrificing the inclusion of subgroups in AYP.	10	Each student counts as 10 percentage points in the subgroup's performance. Example: 100% of a subgroup of 10 must be proficient to meet an annual objective of 91%.
20			20	Each student counts as 5 percentage points in the subgroup's performance. Example: 100% of a subgroup of 20 must be proficient to meet an annual objective of 96%.
30			30	Each student counts as 3.3 percentage points.
50			50	Individual students impact the subgroup's percent less as the number of students increases.
100			100	

Statistical Reliability	Number of Students in a Subgroup	Statistical Reliability
Comment		Impact
Textbooks caution against trying to interpret the significance of groups less than 10. Exception: if all students scored more than n SEM from the cut point.	3	The minimum for statistical reliability may be set higher than the minimum for confidentiality. A state may set a minimum below which subgroup results will be considered unreliable without calculating any statistical test.
	5	
Minimum number cited as acceptable for use of statistical tests of reliability.	10	If the minimum for confidentiality is lower than the minimum for reliability, then highlighting statistically unreliable subgroups among those reported in annual report cards must be considered. <i>If a subgroup meets the minimum, then the state may elect to calculate a statistical test to determine reliability. *</i>
Below 20 students, 100% must be included in an assessment to meet the 95% participation requirement.	20	At this point, the tension between the benefits to students of identifying schools in need of improvement (INOI) and protecting schools from inappropriate identification as INOI arises. The higher the minimum number goes, the fewer subgroups that will be disaggregated. When fewer subgroups are disaggregated, fewer schools are identified as INOI. <i>If a subgroup meets the minimum, then the state may elect to calculate a statistical test to determine reliability. A reliability test will most likely reduce the number of subgroups disaggregated, resulting in fewer subgroups failing the annual objective and fewer schools identified as INOI.</i>
The National Center for Education Statistics uses 30.	30	
Statistical tests can provide a reasonable probability estimate for groups this size.	50	
	100	

Confidentiality n

When are there too few students in a subgroup to allow disaggregating that will not reveal personally identifiable information for individual students? The intent in No Child Left Behind is to remove the possibility that this accountability system would require states to violate the established federal protection of student privacy as mandated under section 444 (b) of the General Education Provisions Act (Family Educational Rights and Privacy Act (FERPA) of 1974). Thus, if a subgroup is so small that publishing the percent proficient would reveal how an individual student scored, the state is not required to disaggregate the subgroup, and the school is neither responsible for reporting on this subgroup, nor responsible for this subgroup's meeting the annual objectives.

The majority of the content in this section is drawn from two prior papers.

- Ligon, G. D. (1998). Small Cells and Their Cons (*Confidentiality Issues*): NCES Summer Data Conference.
- Ligon, G. D., Clements, B. S., & Paredes, V. (2000). *Why a Small n is surrounded by Confidentiality: Ensuring Confidentiality and Reliability in Microdatabases and Summary Tables*. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans.


This discussion makes several assumptions that are necessary to implement the confidentiality intent and methodology of No Child Left Behind.

- The Family Educational Rights and Privacy Act (FERPA) is the primary federal mandate to be followed.
- The values for subgroups with too few students should be suppressed in all public reports.
- Suppressed values should not be recoverable through calculations using other published statistics, e.g., the values of other subgroups or values published in separate documents.
- The existence of a suppressed subgroup should not require the suppression of other sufficiently large subgroups to satisfy the previous assumption.
- The same minimum number of students should apply to all schools, districts, and the state in the calculation of AYP. (This is not specified in the law or regulations, but is an equity issue and a control to avoid manipulation of the rules to benefit individual schools, districts, or states.)

Data collected by governmental agencies must remain confidential in order to protect the privacy of individuals. For the Census Bureau, that information may be related to geographic region, such that information reported for a sparsely populated area can easily be tracked to the few individuals who live in that area. For the Internal Revenue Service, it may be related to income, in that certain income levels are only attained by a few individuals. For educators, it can be information about test scores, disabilities, or socioeconomic status that must be reported in a way that does not reveal information about individual students.

If, for instance, there are two Asian students in the fourth grade of a school and the percent proficient for Asian fourth graders is 50%, the parents of each of those students, knowing their own child's proficiency level, can easily figure the other child's. Alternatively, if there are 100 Hispanic students in the fourth grade, and the percent proficient for Hispanic fourth graders is 100%, then it can be easily determined that each Hispanic student scored at the proficient level. However, important information on subgroups must be reported. Certainly the taxpayers of a school district want to know if students of one gender or ethnicity lag behind others in test achievement. The task becomes finding a way to report enough information while still protecting the privacy of individuals.

Evans, Zayatz, and Slanta (1996) address data confidentiality issues faced by the Bureau of the Census. As in education, "The disclosure limitation problem is to prevent data users from being able to recover any respondent's reported values using values appearing in the published tables" (Evans, et al., 1996). They note that cell suppression is a choice, but while suppressing individual cells can be done relatively easily, suppressing those cells in associated documents can be overwhelming. In this case, if the number of subjects in any cell is less than a certain number, that cell is suppressed from any data presented to the public. While this is fairly simple, it becomes more complicated because those cells may be carried over onto other data tables, and must be suppressed there, as well. In addition, revealing any cells which could lead to the exposure of the values in a small cell must also be suppressed. It is conceivable that this situation could lead to the loss of information for all subgroups. As noted earlier, it is unacceptable in an accountability system to lose information unnecessarily.

 **ESP Insight**
Cell suppression is a choice, but while suppressing individual cells can be done relatively easily, suppressing those cells in associated documents can be overwhelming.
(Evans, et al., 1996)

Adding noise to data tables is suggested as an alternative by Evans, et al. (1996). This means multiplying the data from each establishment by a noise factor before tabulating the data. Over all establishments, the number of positive (>1) and negative (<1) multipliers would be equal, so that they would cancel each other out in the end. Cells which appear in more than one data table would carry the same value to all tables. Zayatz, Moore, and Evans point out, however, that if the number in a cell is too small (1 or 2) it can still be possible to discern a unique contributing entity. Winkler (1997) observes that introducing enough noise to prevent re-identification of records may also make the files analytically invalid.

The method of choice for protecting the confidentiality of student records has been cell suppression. According to numbers reported on state agency web sites, North Carolina and Texas do not report cell sizes fewer than 5, Oregon and Wisconsin fewer than 6, Pennsylvania, Washington, Wyoming, Michigan, Florida fewer than 10, and Colorado and Delaware fewer than 16. As noted above, however, this can lead to problems with suppression of the same cells in other forms of data, or with suppression of other cells which could reveal the information in the sensitive cells.

Moore (1996) identifies three other methods used by the Census Bureau. They are (1) release of data for only a sample of the population, (2) limitation of detail, and (3) top/bottom-coding. Because of the requirements of No Child Left Behind, the first is not practical for the field of education. Information released must be based upon all students in all schools. The second, limitation of detail, is practical and useful in education. The Bureau restricts release of information which would be

restricted to a subgroup less than 100,000. Educators use a much smaller limit, but as mentioned above they do, in fact, restrict release of information about subgroups which do not meet a certain size. The third method, top/bottom-coding, is very appropriate to the field of education. The Census Bureau limits reported levels of income because they might identify individuals. So incomes above a certain level, which might lead to identification of individuals, are reported as "over \$100,000."

Numbers of students in a subgroup can be reported in a similar way. The following is an example of a way to report information about the percent of students who passed an assessment with a score of "proficient" using limitation of detail. See Table 3.

Table 3: Limitation of Detail Using Ranges for Number of Students						
	Total Students	African American	Hispanic	White	Asian	American Indian
% Proficient or Above	77.39	90	85	70	80	*
Number of Students in Group	115	5 to 15	26 to 35	51 to 60	16 to 25	<5

For all of the above subgroups except American Indian, the number of students in the group is more than five. Therefore, the percent proficient or above is reported. Because there are fewer than five American Indian students, the percent proficient or above is not reported. In addition, the actual number of students is not reported. In this way, it becomes far more difficult to deduce the percent or number of American Indian students scoring proficient or above. If actual numbers of students in each subgroup were reported, it might become possible, using numbers in groups and percentages, to discern confidential information. In that situation, more cells would have to be suppressed. This method allows for the maximum amount of information to be reported while still protecting the privacy of individuals.

Assessment scores can also be reported using top/bottom coding. Here, the issue is reporting information about how well a subgroup performed without revealing the exact scores of that group. If a range is reported rather than specific score levels the purpose (how the group did on the test) is met, but individual scores cannot be determined. Note that this is especially important at the top and bottom of the scale (scores of zero or 100). See Table 4.



Table 4: Top/Bottom Coding						
	Total Students	Score Range				
		>94	75-94	50-74	25-49	<25
Percent of Total	100	13	35	26	22	4
Number of Students in Subgroup	115	15	40	30	25	5

As noted earlier, if this particular subgroup were small, and the average score were 100, it would be obvious that all students earned a score of 100. If, however, a score level of >94 was reported, even if all subgroup students scored in that category, it would be impossible to determine an individual's score.

The reported score range or number of students reported in a group range would depend upon the total number of students in the group. The following could be considered for implementation of the above rules if six or more were used as the number of students in a subgroup for confidentiality purposes. See Table 5.

Table 5: Recommended Ranges for Obfuscating Actual Values		
If Total Number of Students is...	Use Percent Above Cut-Point Intervals of...	Use Ranges of Number of Students of...
<6	None	None
6-20	10	25
21-33	5	20
>33	3	5



A minimum cell size of five will meet the requirements of No Child Left Behind, exceed the statistical minimum of three, and provide states a comfort zone above that minimum.

These statements have been summarized from the review of methodologies used by statistical agencies for masking or suppressing the values of small groups and their relevance to education.

1. From a pure and simple statistical perspective, a minimum subgroup size of three protects the identity of the subgroup's members (degrees of freedom = 2). For example, knowing the value for one member of the subgroup still leaves two values unknown, so the value of any one of the other two cannot be determined. An example of a situation that contradicts the use of three as a minimum is a subgroup containing twins. The family of these two students would know the values for two rather than just one student.

No state uses three as a minimum for reporting their public assessment results (AIR 2002).

2. Most state education agencies, school districts, and other types of agencies exceed this minimum “to be cautious.” This protects against someone knowing the values of more than one student in a subgroup.
3. A minimum cell size of five will meet the requirements of No Child Left Behind, exceed the statistical minimum of three, and provide states a comfort zone above that minimum. See Table 6. *Fourteen states use 5 or 6 as a minimum to report their assessment data (AIR 2002).*
4. Minimum cell sizes above five may inappropriately reduce the number of subgroups for which a school is responsible. Excessively high minimums will violate the intent of No Child Left Behind by excluding subgroups and the individual students in them from the accountability mandates of the law. *Twenty-one states use 10 or 11 as the minimum for reporting assessment data; four states have higher minimums up to 31 (AIR 2002).*

Table 6: Minimum Subgroup Size of Five (5) for Confidentiality									
GROUP:	All Students	White	African American	Hispanic	Asian Pacific Islander	American Indian	LEP	IEP	Economically Disadvantaged
% Proficient or Advanced	68%	20%	80%	60%	100%	100%	0%	33%	25%
Number Assessed	22	5	5	5	2	5	4	6	8
Met 75% Annual Objective?	No	No	Yes	No	Yes	Yes	No	No	No
Reported Status	Not met	Not Met	Met	Not Met	Too Few to Report	Met	Too Few to Report	Not Met	Not Met
NOTE: This table is irrespective of statistical reliability decisions.					Statistics Not Reported Publicly				

5. For reporting, if a small *n* is present, blanking out that cell in a table may not be an adequate solution. The cell value may be restorable based upon the values of other cells that are reported. See Table 7.

Table 7: Reconstituting Suppressed Cell Values									
GROUP:	All Students	White	African American	Hispanic	Asian Pacific Islander	American Indian	LEP	IEP	Economically Disadvantaged
% Proficient or Advanced	68%	20%	80%	60%	100%	100%	0%	33%	25%
Number Assessed	22	5	5	5	2	5	4	6	8
Met 75% Annual Objective?	No	No	Yes	No	Yes	Yes	No	No	No
Reported Status	Not met	Not Met	Met	Not Met	Too Few to Report	Met	Too Few to Report	Not Met	Not Met
NOTE: This table is irrespective of statistical reliability decisions.					Statistics Not Reported Publicly			Values That Can be Calculated	

6. If a school has a small subgroup, blanking out that subgroup and all others that might be used to derive that subgroup's value could result in the loss of all subgroups. This should be unacceptable in an accountability system. See Table 8.

Table 8: Loss of Valid Cells to Avoid Disclosing Suppressed Cell Values									
GROUP:	All Students	White	African American	Hispanic	Asian Pacific Islander	American Indian	LEP	IEP	Economically Disadvantaged
% Proficient or Advanced	68%	20%	80%	60%	100%	100%	0%	33%	25%
Number Assessed	22	5	5	5	2	5	4	6	8
Met 75% Annual Objective?	No	No	Yes	No	Yes	Yes	No	No	No
Reported Status	Not met	Not Met	Met	Not Met	Too Few to Report	Met	Too Few to Report	Not Met	Not Met
NOTE: This table is irrespective of statistical reliability decisions.					Statistics Not Reported Publicly			Values That Can be Calculated	
Values Suppressed to Avoid Calculation of Suppressed Values									

7. As an alternative to blanking out all subgroups when one is too small to report, the values can be reported in ranges (with ranges for the n's as well) that obfuscate the actual values enough to prevent calculations. See Table 9.

Table 9: Loss of Valid Cells to Avoid Disclosing Suppressed Cell Values									
GROUP:	All Students	White	African American	Hispanic	Asian Pacific Islander	American Indian	LEP	IEP	Economically Disadvantaged
% Proficient or Advanced	68%	0 to 20%	80 to 100%	40 to 60%	100%	80 to 100%	0%	33%	25%
Number Assessed	22	5 to 20	5 to 20	5 to 20	2	5 to 20	4	6	8
Met 75% Annual Objective?	No	No	Yes	No	Yes	Yes	No	No	No
Reported Status	Not met	Not Met	Met	Not Met	Too Few to Report	Met	Too Few to Report	Not Met	Not Met
NOTE: This table is irrespective of statistical reliability decisions.					Statistics Not Reported Publicly			Values That Can No Longer be Calculated	
Values Suppressed to Avoid Calculation of Suppressed Values									

Reliability *n*

No Child Left Behind specifically excludes from disaggregation for adequate yearly progress or annual report cards...

"...a case in which the number of students in a category is insufficient to yield statistically reliable information..."

When are there enough students in a subgroup to yield a statistically reliable measure of a subgroup's performance toward meeting the annual objective established for adequate yearly progress? The regulations are explicit in leaving to the discretion of each state how to determine statistical reliability.

A general expectation has been that a single minimum number, as is the case for confidentiality, could be selected to determine statistical reliability. However, as this publication discusses in detail:


- the number of students,
- the distribution of their scores, and
- the confidence level adopted by the state

determine reliability. States should consider several alternatives. They can rely upon a minimum number of students or perform a statistical test—or both. See Table 10. The intent of No Child Left Behind appears to be to avoid labeling a school as in need of improvement based upon a subgroup with a small number of students. Therefore, a state could choose to establish a minimum number of students, as established for confidentiality, below which a subgroup is eliminated—regardless of how poorly that subgroup performed. This publication explores the added process of examining even larger groups to identify those that may meet a minimum number of students if one is set, but fail to pass a test for statistical reliability.

This section on reliability is partially based on, with excerpts from, content that originally appeared in a currently unpublished background paper written for the CCSSO CAS/SCASS on Accountability (Ligon, Jennings, and Clements, 2002).

 **ESP Insight**
*There are alternatives to
selecting a single minimum
cell size for reliability.*

Table 10: Approaches for Statistical Reliability			
Approaches for Statistical Reliability		Statistical Test	
		Yes	No
Minimum Number	Yes	Run a test only if the subgroup already had a minimum number of members	Select a number that ensures enough students to be reliable
	No	Run a test to determine the probability that the subgroup really passed or failed	Not an Available Option

 **ESP Insight**
 Test measurement error (SEM) can be determined by either a test-retest or an internal consistency formula. Test publishers rarely use test-retest because of the costs, so states and districts only have internal consistency measures available for use.

Standards for Reliability

At least four contrasting methods are available for establishing the statistical reliability of the determination of whether or not a subgroup has met an annual objective. This is not a determination as to whether or not the overall AYP decision for a school is valid or reliable. The four methods are summarized below in Table 11.

Table 11: Methods for Determining a Subgroup's Annual Objective	
METHOD	DESCRIPTION
Minimum n	With all factors considered there is a minimum number of students that a subgroup should have before being included in an accountability system. Therefore, a single minimum is selected below which a subgroup's results are considered to be based upon too few students to be reliable. No Child Left Behind and the regulations refer to a minimum number of students for statistical reliability without reference to the consideration of their distribution of scores or a confidence level.
Student Sampling Error	The students who are tested in a school (i.e., subgroup) in a year are a sample of the students who might have been tested or who will be tested over the years. Therefore, reliability is based upon how much the results for a year would vary with different samples of students drawn from the same population. Sue Rigney, U.S. Department of Education, has described this perspective as, "AYP spans 12 years and requires continuous improvement for schools that are below the target for a given year. Genuine school level gains on the assessment over time are confounded with the cohort effect. Sampling error is widely recognized as the appropriate error term in this case."
Test Measurement Error	The students tested in a subgroup in a year are the population of students for that subgroup—not a sample chosen from a larger population. Therefore, reliability is based upon how much those students' individual scores would vary if they were retested multiple times. The students tested in a subgroup in a given year are the complete set of students (i.e., population) used for determining AYP. Sampling error can only be estimated because a population beyond these students cannot be measured, so reliability can best be based upon measurement error.
School Measurement Error	The distribution of the percent of students performing at or above proficiency across all schools represents the performance of a population from which each school's students are drawn each year. Therefore, reliability is based upon a confidence interval established around each school's percent. The actual distribution of school level results is the best basis for establishing how much a school's percent might vary across years.

Cronbach et al. (1995) considers a subgroup's scores as either a sample from an infinite population or as the population.

A traditional analysis treats pupils as randomly sampled from an infinite population. In the present context (estimating school-level error) an infinite population would be assumed to exist for each school, and the pupils tested would be conceived of as a random sample from the population associated with the school. The infinite population of pupils associated with the school is obviously hypothetical. Alternatively, the population may be limited to the actual student body, the MN (M = number of classes in a school, and N = number of pupils tested in every class) is the school and grade this year.

Jaeger and Tucker (1998) state that:

Figures that define results for an entire population of individuals are regarded by statisticians as immutable. Since all eligible students were tested, rather than a sample of students, this population value will not fluctuate statistically.

To a statistician, an average score on an achievement test, computed for, say, every student in a particular racial or ethnic group in a school district, would be considered a population parameter. But to a measurement specialist, such an average would be a statistic that estimated what the students' true average score would be, were it possible to administer an infinite number of different forms of the achievement test to the population of students on an infinite number of occasions, provided the students' true achievement did not vary across test forms or occasions. The difference in perspectives between the statistician and the measurement specialist is that the statistician only considers sampling fluctuations across samples of students to be a source of error in trying to estimate a population parameter. The measurement specialist also considers measurement error across test forms and testing occasions, regarding a single administration of one form of a test to be a sample of students' performance across all possible forms and occasions that leave the students' true performances intact.

They also state that "from another perspective, one could argue that the ... result was not only a consequence of the quality of education provided ... but occurred in part because of the particular students who happened to be (enrolled)... in part to the differences between the backgrounds of students who happened to be enrolled ... during the two school years. If the (current students) are considered to be a sample drawn from a larger population ... who might be enrolled across the years,... the percent ... would be regarded as a sample statistic rather than a population parameter."

With which part of the experts' statements will each state align? A straightforward interpretation of AYP is that the students in a subgroup are a finite population representing all those taught and tested in a given year by the school. A broader interpretation is that one year's cohort of students is one sample from all the cohorts which will be passing through the school during the 12-year span of No Child Left Behind.



Since all eligible students were tested, rather than a sample of students, this population value will not fluctuate statistically. (Jaeger and Tucker, 1998)



A straightforward interpretation of AYP is that the students in a subgroup are a finite population representing all those taught and tested in a given year by the school.

What is the question that is being addressed? Here each method differs.

METHOD	QUESTION ADDRESSED
Minimum <i>n</i>	Are there sufficient students in this subgroup to meet the minimum standard for reliability?
Student Sampling Error	How would this school perform with multiple samples of students?
Test Measurement Error	How would these students perform if retested multiple times?
School Measurement Error	How would this school perform over multiple test administrations?

Because the samples cannot vary less than the error already present in the measurement itself, sampling error is typically larger than measurement error. Methods based upon student sampling error assume that the measurement error is reflected in the sampling variance. Methods based upon measurement error assume that sampling error is not relevant. Methods based upon school measurement error assume both student sampling error and measurement error are reflected in the variance observed across schools.

No Child Left Behind asks, "Are there enough students in the subgroup to ensure that we would classify a subgroup's performance on an annual objective the same (i.e., avoid declaring a school as failing when the school has an acceptable probability of passing) if...?" The "if" varies depending upon the method applied.

METHOD	Are there enough students in the subgroup to ensure that we would classify a subgroup's performance on an annual objective the same if...
Minimum <i>n</i>	More students had been tested?
Student Sampling Error	A different sample of students had been drawn from the same population?
Test Measurement Error	The same students were retested?
School Sampling Error	The school is measured again at another time?

The following statements provide the basis for establishing reliability.

1. The lowest level question for a state to answer as posed by No Child Left Behind is simply:

Did the subgroup meet the annual objective? (Of course there are multiple annual objectives for multiple indicators, and each subgroup must meet the annual objective for each one individually.)

2. This accountability question translates to whether or not an equal or greater percent of the subgroup's students performed at the proficient level or higher on the indicator compared to the percent established by the state as the annual objective.
3. The denominator for this percent is the number of students who:
 - a. Have a valid assessment score or other determination of their proficiency level (excluding those not tested),
 - b. Were enrolled for a full school year as defined by the state, and
 - c. Belong to the subgroup (or total) being measured.
4. For a school to disaggregate a subgroup, there must also be enough students in the subgroup to protect the individual identity of each student when the results are reported. If there are too few, then a determination of whether or not this subgroup met the annual objective is unnecessary because it will not be disaggregated. (This may differ if a state adopts different minimum numbers for AYP and annual report cards.)
5. For a school to disaggregate a subgroup, there must be enough students in the subgroup to ensure statistical reliability, i.e., there is a reasonable level of confidence that the decision made about the subgroup is the right one. Alternatively, if the state does not set a minimum number for statistical reliability, then the rule adopted for establishing reliability would be applied.
6. Sequentially, a determination of whether the subgroup is large enough to protect individual students' identities should be first. Then if this standard is met, a determination of statistical reliability should be made.



Reliability is getting the same result and drawing the same conclusion from more than one observation. Yet reliability is not validity. Invalid measure might be very reliable.

The Authors' Perspective on Error

After carefully thinking through all of these issues, we determined that SEM is the best error estimate for AYP. However, because other perspectives have been published extensively, they are also presented here. We would expect that a state could present to the USED an acceptable rationale for any of the four methods described above. Certainly the law and the regulations do not exclude any justifiable method.



SEM is the best error estimate for AYP.

We have not recommended traditional reliability statistics (sampling error) because they depend upon some basic assumptions about students, schools, and scores that are not generally true. Ask principals if the students in their schools are randomly drawn from a population. They know they are not. Ask principals if they understand that test scores can vary just by retesting the same students. They know that to be true.



We have not recommended traditional reliability statistics (sampling error) because they depend upon some basic assumptions about students, schools, and scores that are not generally true.

- Districts and schools do not draw their students randomly from a designated population of students. (See Figure 3.) The political process of drawing district and school boundaries is not random.



The reliability question is “how confident are we that 75% of the students perform at the proficiency level?” Not “how confident are we that 75% of a different sample of students would also perform at the proficiency level?”

- The students tested one year are not necessarily the same as those tested the next. The subgroups and the students in them may vary considerably from one year to the next.
- The assessment scores and the student performance levels derived from them are not likely to be normally distributed.
- School statistics are not likely to be normally distributed, e.g., the percent of students above the criterion for proficiency is not a statistic that is normally distributed across schools.
- The variance of scores around a school’s mean is irrelevant to the determination of whether or not a school meets its annual objective.

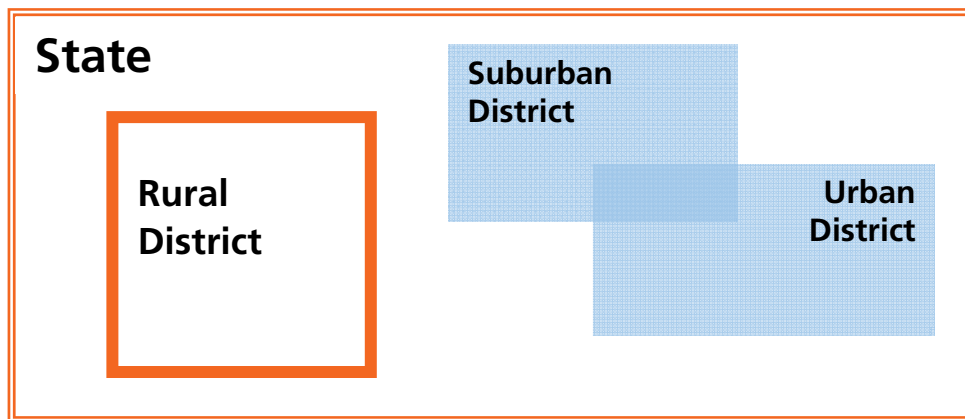
Six Degrees of Separation

Harvard Sociologist Stanley Milgram in 1967 found that only five or fewer connections between people were needed to link strangers. Using 100 friends, it is possible to “know” the whole planet within 5 steps. Then Strogatz and Watts from Cornell pointed out that all these connections are not mutually exclusive—our friends know the same friends as we do. Strogatz says, “We are very much constrained by our socioeconomic status, geographical location, background, education, professions, interests, and hobbies. All these things make our circle of acquaintances highly nonrandom.”

The same applies to students in schools. They are not there by any probabilistic order or randomness. They are there because a political body drew boundary lines, because public housing is available, because private schools are too expensive for them, because the family moved. They do not enroll as random samples from an attendance area. **The students in a school each year are their own population. See Figure 3.**

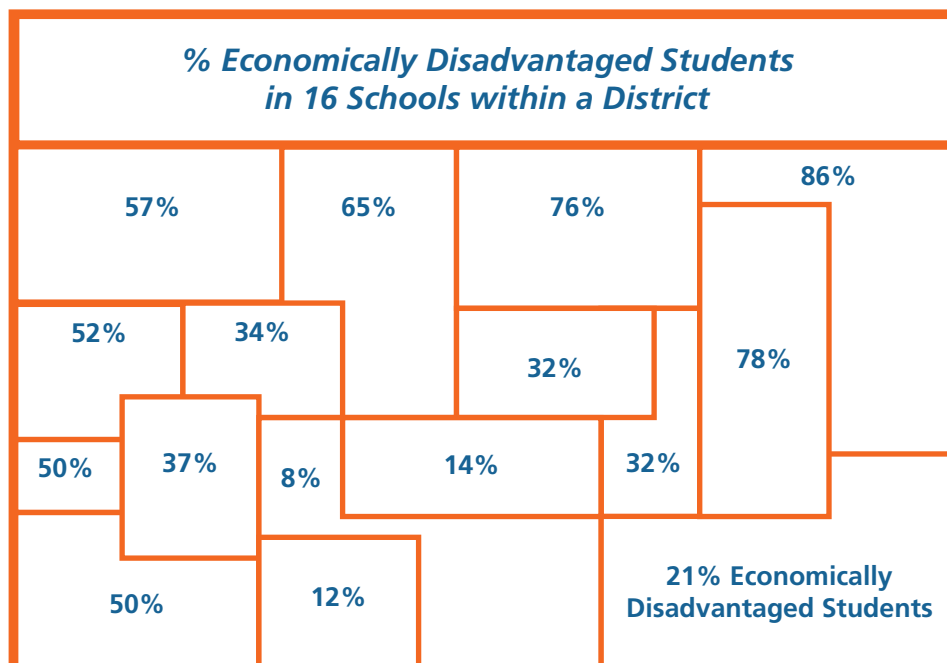
With these conditions, the assumptions required to use our favorite statistical tests are violated. The tests rendered inappropriate include multiple-linear regression, analysis of variance or covariance, and other popular parametric analyses. Statistical tests that rely upon the standard error, variance, or deviation are all based upon assumptions about and the use of means—either student score means or school means. Even if the means are of the percent of students performing at or above the criterion for proficiency across all schools (which are the means used to establish a traditional confidence interval), these confidence intervals result in illogical and unacceptable conclusions about schools. For example, a school with only five students, but all of them making perfect scores, may be designated as statistically unreliable—even though all five scored so high above the criterion for proficiency that not a single one of their scores is in doubt. No matter how many times these students are tested, the status of this small group’s success must be considered statistically reliable.

Figure 3: Are Districts Randomly Sampled from State Populations?

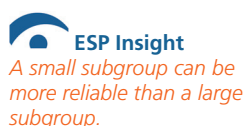


	Proficient & Advanced	White	African American	Hispanic	Asian, PI	American Indian	Econ. Disadv.	LEP	IEP
State	75%	50%	12%	12%	1%	4%	45%	10%	12%
Rural District	80%	75%	10%	15%	2%	5%	25%	12%	12%
Urban District	65%	25%	20%	10%	8%	1%	65%	6%	16%
Suburban District	95%	80%	2%	5%	8%	0%	7%	1%	9%

Figure 4: Are Students Randomly Sampled from Districts for Schools?



States that choose to adopt a methodology based upon sampling error will follow the lead of many educational researchers who apply statistical techniques to assessment data even though all of the assumptions underlying the analyses are not met. They will be able to say that they are comfortable with the degree to which the assumptions are met. States that choose to adopt a methodology based upon measurement error will do so based upon the conclusion that the appropriate statistic is one that describes how reliable each student's score is, and makes a determination of the probability that enough of the students whose individual scores are in doubt performed at the proficient level to allow the school to meet its annual objective.



There is one basic assumption that all statistical tests must meet. The assumption is that enough students are measured to make sense. Making sense for No Child Left Behind is simply, "Are there enough students in the subgroup to ensure that we avoid declaring a school as failing when the school has an acceptable probability of passing if the students were retested?" In other words, measurement error users do not want to declare a school as low performing if too many of a subgroup's basic-level students scored within the test's standard error of measurement or if the school or subgroup scored close enough to the annual objective to leave room for doubt. Sampling error users do not want to declare a school as low performing if another sample would likely have scored above the annual objective. Both determinations are at least partially determined based upon the number of students are included in the analysis.

This changes the focus from simply how many students are in the subgroup to how many students in the subgroup are performing so close to the criterion that their proficiency level is in doubt (measurement error) or do samples of this size vary enough to allow this sample to cross over the annual objective (sampling error).

Read this closely. A small subgroup can be more reliable than a large subgroup.

Now we can move on to the more controversial statements. A strict interpretation of AYP is that statistical reliability is required for a single subgroup, for the given year being measured. After all, the decision being made is whether or not to include that subgroup as part of a school's AYP determination. This interpretation would not demand acceptance of Cronbach's definition of an effective school. The bottom line here is that many people are challenging AYP as a methodology, attempting to measure its validity and reliability. That is not the goal of this publication. Here the intent is to describe methodologies that comply with AYP. Not to validate or challenge its basic tenants.

AYP is an annual status. Measures of AYP in different years are not independent observations of a school at the same point in time. The assumptions that must be made to use a stability analysis for AYP are not likely to be met for an individual school (e.g., same students each year, students randomly assigned from a larger population each year, no change in intervening variables, etc.). Therefore, it is at least practical, if not logical, to consider the annual determinations of a school's AYP status as reflecting different years (and different groups of students, faculty, resources, etc.). Thus, the estimates of statistical reliability should focus on each year's measures with the realization that a school's status may change back and forth if that school is performing close to the cut point of the annual objectives.

1. Statistical reliability for subgroups is not a stability measure across years, but a determination of the confidence we have in the current year's status of the school.

Students may be assigned to a school from a population, but that assignment is far from random. An individual school cannot be assumed to have a random or representative sample of students from the district's population of students. Even within the school's attendance zone, which students enroll is not random or representative. So, analyses that rely upon sample statistics do not fit well for a school that is actually its own population. AYP is an individual school determination that is not at all based upon the norms or averages of a district from which the school's students are drawn. So our second statement is:


2. A school's students are not randomly or representatively drawn from a district's population, but make up the school's own population. Therefore sample statistics do not apply to the determination of statistical reliability.

No Child Left Behind by its name makes it clear that we are to look at individual students, not averages. The AYP methodology counts students and determines percents rather than using any mean scores to determine AYP. So our third statement is:

3. Parametric statistics do not meet all of their assumptions because we are counting students who perform in categories rather than calculating any measures of central tendency based upon continuous variables.

Because every individual student counts, the reliability of the decision of each student's performance level is the key. The standard error of measurement (SEM) is the metric that describes how reliable an individual student's score is on an assessment. So our next statement is:

4. The standard error of measurement (SEM) at the cut point for each assessment (at each grade level, in each area) estimates the reliability of a student's actual performance at the criterion for proficiency. (The SEM must be calculated at the criterion.) Students who perform within n SEM (whatever range is adopted) of the criterion are the ones whose statuses are in doubt.
5. Students who perform outside the confidence interval defined by the SEM can be considered to have a statistically reliable placement at the basic or proficient levels.
6. The number of students performing within the SEM range of the criterion score determines the statistical reliability of the school's status on AYP.
7. If a school has enough students scoring more than 1 SEM above the criterion score to satisfy the annual objective, then that school's status of meeting AYP can be considered to be statistically reliable—regardless of the total number of students.
8. If a school has enough students scoring more than 1 SEM below the criterion score, then that school's status of not meeting AYP can be considered to be statistically reliable regardless of the total number of students.

 **ESP Insight**
*The real instance when
statistical reliability matters
is when a subgroup fails to
meet the annual objective
for AYP.*

In No Child Left Behind, there are consequences for not meeting AYP. However, meeting AYP or suppressing a subgroup because there are too few students or because the results are not statistically reliable are of equivalent consequence. In each case, the school avoids being classified as low performing. This means that the consequential decision for suppression of a subgroup's performance occurs when the subgroup does not meet the annual objective for AYP. (If a state is rewarding and recognizing schools for consistently meeting AYP standards, a reliability test for schools meeting AYP may be desirable as well.)

9. The real instance when statistical reliability matters is when a subgroup fails to meet the annual objective for AYP.
10. For schools not meeting the annual objective, if a school has enough students within n SEM below the criterion to place the school's failing status in doubt, then a *Chi*-square test can be applied to determine the probability that enough of these students have true scores at or above the criterion to categorize the school as meeting AYP. In other words, if four

more students passing would have met the annual objective, and the school has at least four students performing within n SEM of the criterion, then the status of the school can be considered to be in doubt and can be tested using Chi-square.

11. If a school's probability of having enough students below the criterion is high enough, then the school's status of not meeting AYP is statistically reliable.

Methods have been used that calculate a SEM based upon school distributions (Yen, 1997). These result in a confidence interval for a school's percent above the criterion score that is based upon the total number of students in the school. However, the resultant confidence interval is applied to every school regardless of whether or not the school has any students within 1 SEM of the criterion score. This can result in labeling a school as statistically unreliable when in fact not a single student's proficiency level is in doubt. So we need this statement.

12. A confidence interval based upon distributions of school-level percents and school size may inappropriately label some schools as unreliable.

The intent of No Child Left Behind relative to statistical reliability appears to be a fairness issue. This fairness issue is to avoid a school's being considered low-performing based upon so few students that the results might have been different just by retesting the students the next day. The wording of the law makes it clear that the intent is to find small subgroups that are unreliable. The intent does not appear to have been to declare large subgroups to be unreliable under any unanticipated circumstance. When a significant number of students score perilously close to the criterion for proficiency, the results for even a very large subgroup can be considered to be unreliable. However, a state could be considered to be complying with the intent of the law if the results for any subgroup over an established, reasonable number (e.g., 100) are declared to be statistically reliable. However, this does not mean that all subgroups under 100 are statistically unreliable.

Why the Standard Error of Measurement for Individual Student Scores at the Criterion for Passing is the Appropriate Metric for Judging the Statistical Reliability of a Subgroup's Status on Meeting an Annual Objective for Adequate Yearly Progress

Standard error of measurement (SEM) is used as an acknowledgement of the fact that a student's true ability can never be measured with absolute accuracy. Whereas height, weight, and speed can be directly observed, academic achievement or ability cannot. However, educational scientists have found ways of approximating true ability using observed measures, such as test scores. When a test is constructed, the relation between scores on that test and true abilities can be computed. Confidence bands are established around observed test scores, indicating what range of true abilities each test score represents. If, for instance, a student has a raw score of 35 on an achievement test, and the SEM is 2 items, then it can be said with 68% accuracy that the student's true ability falls within plus or minus one SEM, or a raw score between 33 and 37 on the test. As larger bands are constructed around the observed test scores, true score can be estimated with more confidence. Using the

above example, it can be said with 95% accuracy that the same student's true ability would be measured at between 31 and 39 (2 SEM) on that same test. Thus, the observed score of 35 is a good approximation of the student's true ability as long as we are comfortable with the confidence interval established.

A big question arises with schools that do not have enough students scoring above the cut score to be deemed "passing," but with a large number of students scoring within one SEM below the cut score. In this situation, it could be that the students' true abilities are in fact high enough for them to have scored above the cut score, and in fact it was only measurement imprecision and errors that caused some of them to fail. If the same students were tested again on another day, there is a describable probability they would score above the cut score, based upon the SEM of the test.

If a cut score were set at 35, with an SEM of 2 points, and the student achieved a score of 40, it could be said that the judgment of "passing" was reliably made for that student because the score is more than two SEM from the cut point. Similarly, if the student had a score of 30, it could be said that the judgment of "failing" was reliably made for that student. If, however, the cut score were set at 35 and the student scored a 35, keeping in mind that the student's true ability ranges from 31 to 39, a judgment of "passing" or "failing" is much less reliable. These are the students whose status is in doubt when determining a school's status on an annual objective.

Which Subgroups Require a Reliability Determination?

The consequential decision for suppression of a subgroup's performance based upon a lack of statistical reliability occurs when the subgroup does not meet the annual objective for AYP. In No Child Left Behind, there are negative consequences for not meeting AYP. However, meeting AYP or suppressing a subgroup because there are too few students or because the results are not statistically reliable are of equivalent negative consequence. In each case, the school avoids being classified as in need of improvement. (If a state is rewarding and recognizing schools for consistently meeting AYP standards, a reliability test for schools meeting AYP may be desirable as well.)

- The real instance when statistical reliability matters is when a subgroup fails to meet the annual objective for AYP.

A state's plan may accept the "met" status for all subgroups without applying a statistical test for reliability. The subgroup would still need to meet the minimum *n* for confidentiality, and any minimum *n* for reliability if one has been set by the state.

The intent of No Child Left Behind relative to statistical reliability appears to be a fairness issue. This fairness issue is to avoid a school's being considered low-performing based upon so few students that the results might have been different just by retesting the students the next day. The wording of the law clearly recognizes that too few students in a subgroup impacts reliability, but does not address declaring large subgroups to be unreliable under any unanticipated



*A state's plan may accept the "met" status for all subgroups without applying a statistical test for reliability. The subgroup would still need to meet the minimum *n* for confidentiality, and any minimum *n* for reliability if one has been set by the state.*

circumstance. When a significant number of students score perilously close to the criterion for proficiency, the results for even a very large subgroup can be considered to be unreliable. However, a state could be considered to be complying with the intent of the law if the results for any subgroup over an established, reasonable number (e.g., 50) are declared to be statistically reliable. However, this should not mean that all subgroups under 50 are statistically unreliable.

Alternative Methods for Establishing Statistical Reliability

Table 12: Alternative Methods for Establishing Statistical Reliability		
METHOD	TEST	DESCRIPTION
Minimum n	None	State selects a number below which disaggregation is not performed.
Student Sampling Error	Binomial Test	Gravetter & Wallnau, 2000, page 623
	Test of Frequencies	Pearson Chi-Square, Hays, 1994, page 369
	(School-Level Options)	(Direct Computation, Split-Half, Random Draws with Replacement, Monte Carlo, Correlations)
Test Measurement Error	Reliable Cut-Point	State cut-point is higher than desired performance level.
	Confident Cut-Point	State accepts student performance within n SEM of desired level.
	SEM Test	State counts as proficient only student n SEM above cut-point.
	Fail-Safe Test	Pearson Chi-Square test for association, Hays, 1994, page 369, with students within n SEM of cut-point.
School Measurement Error	Model I, II, or III	Sliding scale established using distribution of school percent proficient across schools of various sizes.

The following descriptions have been provided to various groups studying the options for statistical reliability. Much debate has occurred, based mainly around the assumptions required for each analysis.

The Minimum n

Procedure: Establish a set minimum number with face validity (e.g., high enough to instill confidence, but low enough to avoid the look of attempting to exclude too many small schools). The state might defer to the rule established for confidentiality and assume that if a school has sufficient numbers of students to mask identities that there are enough students to yield a reliable measure. However, if this is five, a number that low may not have the required face validity.

The National Center for Education Statistics uses 30 as a minimum. In the textbooks, 30 is where the graphs start leveling out, meaning the benefit for going higher begins to lessen. However, 30 would eliminate substantial numbers of subgroups and even whole schools from the accountability process. Jeager and Tucker (1998) used 10 as a minimum for reporting in a sample scenario. There is a point at which an annual objective becomes a virtual 100% objective for a small school. For example, if the annual objective is 81%, a group of five students must be 100% proficient, because four students are only 80%. Examining that issue shows that a group of 20 students does not reach a 100% requirement until the annual objective is 96%. This is a leveling out point in the chart. Thus a criterion of 20 would have some face validity in that it is high enough to delay the 100% virtual standard, but low enough to include most schools with only one class per grade level.

An example:

Total Students:	8
Students Performing at the Basic Level:	0
Students Performing at the Proficient Level:	0
Students Performing at the Advanced Level:	8

If the cut point for the advanced level is more than two standard error of measurement (SEM) units above the cut point for the proficient level, the argument that this small subgroup's meeting of the annual objective (even the year 12 objective of 100% proficiency) is statistically reliable is very strong.

Another example:

Total Students:	8
Students Performing at the Basic Level*:	8 *2 SEM below the Cut Point
Students Performing at the Proficient Level:	0
Students Performing at the Advanced Level:	0

If the scores for all eight of these students fall more than two SEM below the cut point for proficiency, the argument that this subgroup's failing to meet the annual objective is not statistically reliable is very weak.

The bottom line for this alternative is that the face validity of the single-criterion minimum number for statistical reliability must be politically very strong. There will be subgroups of students that clearly appear to have failed or passed but have too few students to be counted.

Another perspective on this is to look at how influential a single student is on a subgroup's performance. In a subgroup of five students, a change in one student's performance results in a change of 20%. In a subgroup of 15 students, a change in one student's performance results in a change of 6.7%. From 15 on, the impact lessens. At 100 students, a change in one student's performance results in a change in 1%. This is important because annual objectives may increment only one or two percentage points each year. Small groups would have to make substantially larger percentage gains to meet an annual objective that might go up only one percent in a year. An example is provided in Table 13.

Table 13: Change Required for Small Groups to Improve One Percentage Point

Subgroup Size	Percent Represented by One Student	Percent Required to Meet Year One Annual Objective of 80%	Percent Required to Meet Year Two Annual Objective of 81%	Change Required
5	20.0%	80%	100.0%	20.0%
15	6.7%	80%	86.7%	6.7%
20	5.0%	80%	85.0%	5.0%
30	3.3%	80%	83.3%	3.3%
75	1.3%	80%	81.3%	1.3%
100	1.0%	80%	81%	1.0%

This illustrates that the precision at which annual objectives may be measured imposes greater performance standards on small groups than on large ones that can more precisely match an annual objective.

A minimum n ranging from 20 to 30 should be considered.

Student Sampling Error

Alternatives described for this methodology are based upon the assumption that students within a subgroup are sampled from a population and that if different samples are drawn, the results would vary within a range established by probability based upon either the normal curve or the binomial distribution.

The Binomial Test

Procedure: Consider that the percent proficient or above for a subgroup is one value for a sample of students and that other samples from the same population would range around that value. The probability of the actual percent observed being above the cut point for the annual objective can be established.

To illustrate this, consider a subgroup of 20 students, 7 performing at the proficient/advanced levels and 13 at the basic level. The annual objective is 40% proficient/advanced, so the 35% for this subgroup does not meet the annual objective.

To test the probability that this subgroup's true percent is 40%, ($H_0: p=.40$) the following formula is used.

$$z = \frac{X/n - p}{\sqrt{pq/n}}$$

$$= -.459 \quad p=.677$$

$$= .35 - .40$$

$$\sqrt{(.4 * .6) / 20}$$

The probability is 67% that the subgroup's true value is 40%. The null hypothesis is not rejected.

Where:

1. X/n is the proportion of individuals in the sample who are classified in category A.
2. p is the hypothesized value (from H_0) for the proportion of individuals in the population who are classified in category A.
3. pq/n is the standard error for the sampling distribution of X/n and provides a measure of the standard distance between the sample statistic (X/n) and the population parameter (p).

(Gravetter & Wallnau, 2000, page 623)

Test of Frequencies

Procedure: Consider that the percent proficient or above for a subgroup is one value for a sample of students and that other samples from the same population would range around that value. The probability that the actual distribution of students at each performance level would be above the annual objective with subsequent samples can be established.

The formula for the Pearson chi-square test is

$$\chi^2 = \sum \frac{(f_j - m_j)^2}{m_j}$$

where f_j is the obtained frequency in category j
 m_j is the expected frequency in that same category j

(Hayes, 1994, page 369)

Other sampling-based reliability tests are described by Hill (2002). As stated in his publication, these are tests to determine "the reliability of an accountability system." They are described in relation to the reliability of a school-level decision, not decisions for individual subgroups.

Direct Computation

Procedure: Compute the errors around estimates using areas under the normal curve to determine the probability of a correct classification. To apply this to AYP, a state would need to determine how to calculate the appropriate mean and standard deviation relative to the percent of students performing at or above proficiency.

Split-Half

Procedure: Randomly divide a subgroup into two samples and test the difference between them. The technique is problematic with small groups because the group size is reduced to half, thus the probability of statistical reliability is reduced as well.

Random Draws with Replacement

Procedure: Draw random samples repeatedly from the subgroup and test the differences across these samples. Rogosa (1999) detailed this sampling technique. This is similar to “bootstrapping,” which typically calls for 500 or more samples to be drawn for analysis (Oppenheimer, 1997). Multiplying 500 times the number of subgroups in a state would produce a very large number of samples to be drawn and analyzed. Fortunately, today’s computers can handle this task if someone has the time to run them.

Monte Carlo

Procedure: Using estimates of the parameters of a subgroup, draw repeated samples for the school. As with the prior method, multiple random draws are required.

Linn and Haug (2002) correlated school ratings based upon a weighted standard score computed from student proficiency levels across years. This provided a measure of stability for the ratings, but did not explore the reliability of subgroups either within or across years.

Correlations

Procedure: Compute the correlation of school (subgroup) ratings (or percents) across years to establish a typical relationship. A state’s plan would need to describe how to use these correlations to establish reliability separate from real changes that would occur from improvement over time.

A necessity for all student sampling error methods is to know or estimate the population mean and variance. A state’s plan would need to make clear if the same population parameters are estimated for all subgroups or if separate estimates would be made for each subgroup. The latter seems reasonable because subgroups have performed differently on state assessments over the years. Knowing the actual population parameters is unlikely. The best estimate of the population parameters is typically the sample parameters. In this case, the rationale for a sampling-based methodology is diluted because the population and the sample must have the same mean.

Test Measurement Error

The Criterion- Versus Norm-Referenced Analogy

No Child Left Behind clearly supports criterion-referenced assessments and a standards-based accountability system. The sampling-based methodologies described above are logically aligned with the norm-referenced models of

assessment and accountability where continuous scales, means, and standard deviations are employed. Criterion-referenced assessments make pass-fail judgments about students. A well-designed criterion-referenced test will not provide the distribution of student scores that is assumed for parametric statistics, e.g., normal distributions. The best illustration of this is year 12 when schools are expected to be at 100% proficiency. Neither the distribution of student scores nor the distribution of school percents will be normally distributed. Both will be highly negatively skewed.

The test measurement error methods avoid the issues of normal distributions for scores.

The first two alternatives in this category are fascinating, because they provide a rationale for declaring every subgroup to be statistically reliable without the application of statistical test for reliability.

The Reliable Cut Point

Procedure: Assert that when the state's cut score was adopted for proficiency that the SEM was accounted for by raising the required cut score by n SEM to ensure that no student would be categorized as proficient unless that student's score was statistically reliably above the performance criterion desired by the state. With this assertion, every school's percent proficient would have statistical reliability and no subgroups would be disregarded (other than for having too few students for confidentiality). All subgroups with fewer students than required for confidentiality could be considered to be statistically unreliable as well. This is a moot point because they would not be disaggregated and would be excluded any way.

We have not found any state (yet) that has made this assertion. This simply means that the cut score is set high enough that there is little doubt that a student meets the passing standard if that score is attained. This would be a policy decision. This one negates the need for any statistical analyses.

This method would result in a lower starting point for setting annual objectives because a lower percent of students would meet the criterion. However, meeting the 100% goal in 12 years would be more difficult.

The Confident Cut Point

Procedure: Assert that every student who scores within n SEM of the cut score for proficiency has an acceptable statistical probability of actually being at or above the cut score; therefore, the real cut score for determining proficiency for AYP is n SEM lower. With this assertion, every school's percent proficient would have statistical reliability and no subgroups would be disregarded. All subgroups with fewer students than required for confidentiality could be considered to be statistically unreliable as well. This is a moot point because they would not be reported and would be excluded anyway.

This is also a policy decision that would negate the need for any statistical analyses. This might be characterized as lowering a state's standard, but in reality it is an acknowledgement that the state's test is not precise enough to fail with confidence a student who gets this close to passing.

The SEM Test

Procedure: Consider all schools and subgroups with fewer students than required for confidentiality to be statistically unreliable as well, or set a higher minimum (e.g., 20) based upon the examples presented in the minimum n alternative above. For all other schools and subgroups, calculate the percent of students scoring n SEM above the cut point for each group and use that percent as a statistically reliable measure of whether the school met the annual objective. The effect of this is to raise the criterion by the size of the SEM as described in alternative 1 above. Then for those schools not meeting the annual objective but with some students performing above but within n SEM of the criterion, test the probability that enough of the students above but within n SEM of the cut point would be above the cut point with multiple observations (*Chi-square*) and declare schools with sufficient numbers to be statistically reliable and to have met the annual objective. All other schools with sufficient numbers of students above the cut point but not above n SEM will be considered statistically unreliable.

For subgroups with too few students above the cut point, identify those with enough students more than n SEM below the cut point to have not met the annual objective. These subgroups did not meet the annual objective and are statistically reliable. Calculate a *Chi-square* and probability for subgroups with enough students within n SEM to have a probability of meeting the annual objective to determine those that will be considered statistically unreliable (i.e., enough students score close enough to establish the possibility that they could have scored higher if retested).

Figure 5 provides an overview of how Alternative 3 might work.

Figure 5: Flow Chart for Determining Statistical Reliability – SEM Test Alternative

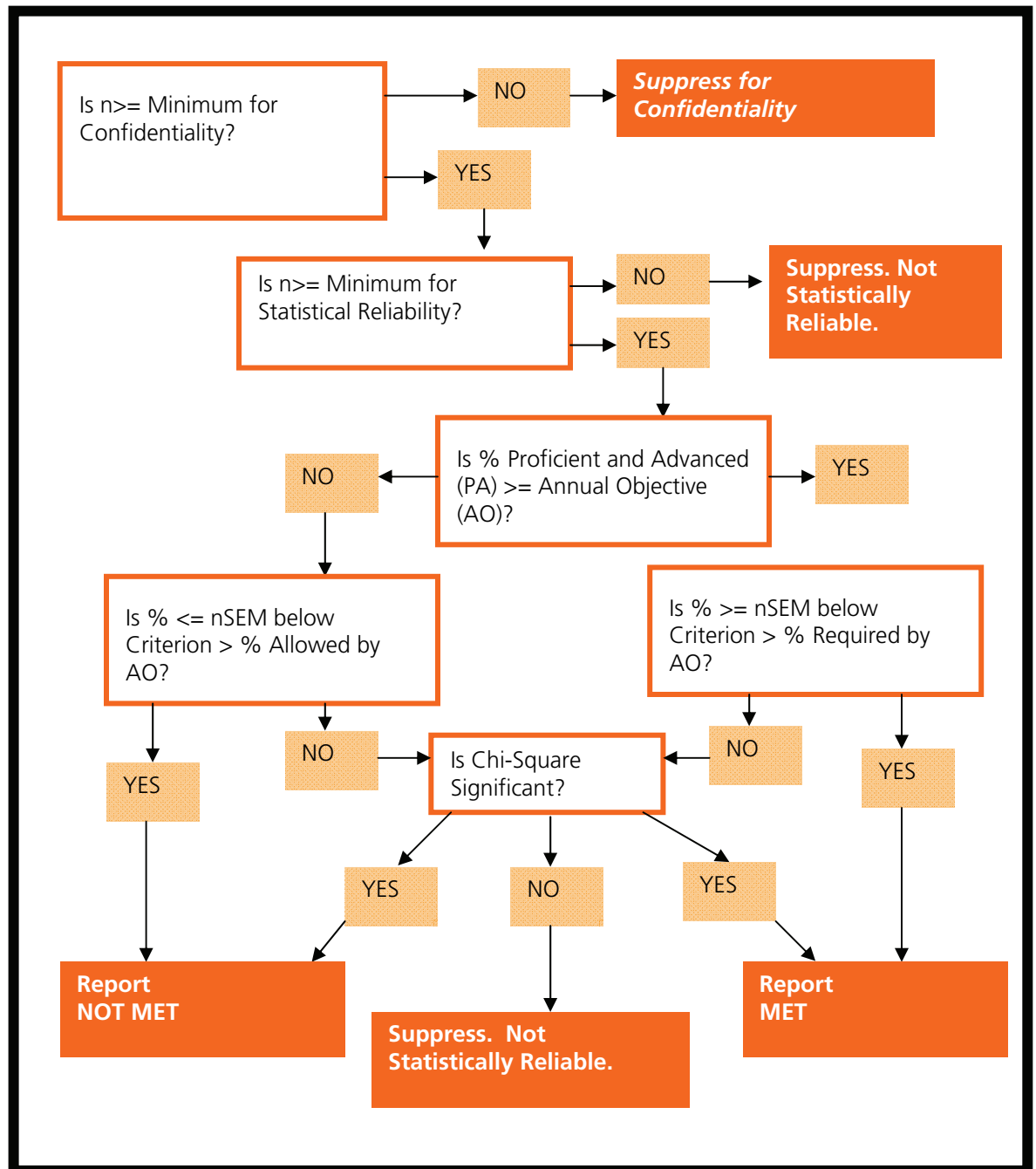


Table 14 provides some sample schools using an annual objective of 75%.

Table 14: Sample Schools Using an Annual Objective of 75%							
Situation	Total Number of Students	Number Needed to Pass	Passed by More than 1 SEM	Passed, but within 1 SEM	Failed, but Within 1 SEM	Failed by More than 1 SEM	Reliable/Not Reliable
A	100	75	75	3	7	15	Reliably passed
B	100	75	65	10	10	15	Not reliable
C	100	75	30	0	0	70	Reliably failed
D	10	8	8	0	2	0	Reliably passed
E	4	3	0	1	0	3	Reliably passed
F	25	19	3	10	10	2	Not reliable

The Fail-Safe Test

Procedure: Accept the results for all subgroups that meet the annual objective regardless of size because the consequences of meeting or being declared statistically unreliable are the same.* Then apply the methodology in alternative 3 above only to those failing subgroups with sufficient numbers of students within n SEM of the criterion to place the status of the subgroup in doubt. For all subgroups that fail, determine if there are enough students failing by n SEM or less to place the results in doubt. If not, the school has failed with statistical reliability. If there are enough students in doubt, determine the probability that enough of those students below but within n SEM of the criterion may have scored above if retested.

**No Child Left Behind asks states to recognize schools that have performed well in meeting AYP and in closing the gap between subgroups. Alternative 4 may not be acceptable if a state does not want to reward and recognize schools that may have met annual objectives without an established degree of reliability. In which case, Alternative 3 is preferable.*

Figure 6 provides an overview of how alternative 4 might work. This process is complex, but a simpler chart can be developed that provides the single number for determining statistical reliability for each subgroup.

Figure 6: Flow Chart for Determining Statistical Reliability – Fail-Safe Alternative

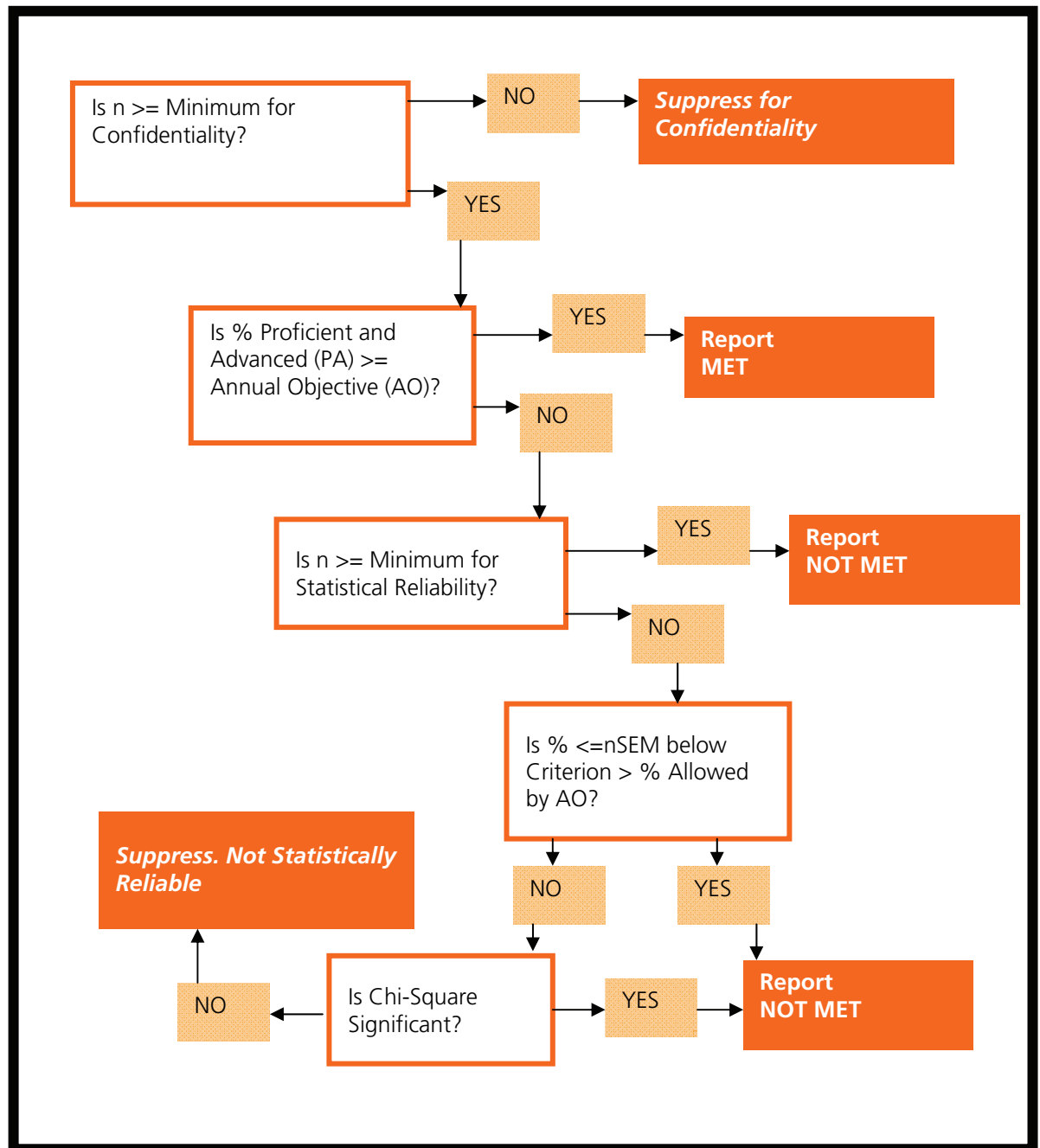


Figure 7: Statistically Unreliable Group

		<div> <div>Basic >nSEM below Criterion</div> <div>Proficient & Advanced >nSEM above Criterion</div> </div>		
Actual	20	10	30	40
True to Change Decision	20	5	35	40

Chi-Square = 2.05
P = .15

- Accept Null H (Same)
- Group Could Have Passed
- Not Statistically Reliable

Figure 7 provides an example of a subgroup that did not meet the annual objective, but has sufficient numbers of students within *n*SEM of the cut point who have a probability that they may pass if retested.

Figure 8: Statistically Reliable Group

		<div> <div>Basic >nSEM below Criterion</div> <div>Proficient & Advanced >nSEM above Criterion</div> </div>		
Actual	25	15	20	40
True to Change Decision	25	0	35	40

Chi-Square = 12.00
P = .00

- **Reject Null H (Same)**
- **Group Not Likely to Have Passed**
- **Statistically Reliable**

Figure 8 provides an example of a subgroup that did not meet the annual objective, and has insufficient numbers of students within *n*SEM of the cut point who have a probability that they may pass if retested.

Chi-square may be inappropriate for very small groups (fewer than 10), so Fisher's exact test (Hays, 1994) was also used to determine statistical reliability. The table below shows that the differences between the two are minimal, but when the call is close for a group, the two can differ. The annual objective is 75% in the examples in Table 15.

Table 15: Statistical Significance of Decision that Subgroups Failed to Meet an Annual Objective

Subgroup	Passed by More than 1 SEM	Passed, but Within 1 SEM	Additional Number Needed to Pass	Failed, but Within 1 SEM	Chi-Square Value Likelihood of NO Statistical Reliability		Fisher's Exact Test Likelihood of NO Statistical Reliability
A	70	4	1	6	.20	.65	.50
B	71	2	2	7	1.00	.32	.31
C	65	4	6	25	3.39	.06	.06
D	70	4	1	25	.13	.72	.50
E	70	0	5	0	N/A	N/A	N/A
F	40	25	10	25	2.38	.12	.08
G	73	0	2	15	2.14	.14	.24
H	59	10	6	20	2.44	.12	.09
I	40	10	25	30	31.75	0	0
J	40	20	15	15	12.00	0	0
K	40	30	5	10	2.05	.15	.12

In order to help determine if a decision whether a subgroup met an annual objective or not is statistically reliable, a simple Chi-square test can be computed to determine whether the observed distribution of scores in doubt is reliably worse than the distribution of scores that would allow the subgroup to pass.

In the first subgroup (A), 70 students passed the test by more than 1 SEM. The scores of those students are not in doubt. However, 4 students passed within 1 SEM and 6 students failed within 1 SEM, and 74 passing is not enough for the school to be rated passing. If just 1 of the 6 failing students had passed, the school would have been rated as passing. Given the fact that any or all of the 6 failing students might have a true ability above the cut score, how likely is it that, in fact, at least one of those 6 actually has the knowledge and skills to be at the proficient level? In statistics, a range of 0 to 1.0 is used to express probabilities. Any likelihood above .05 means that the situation is very likely. In this subgroup, a likelihood of .65 means that the two distributions (4 pass/6 fail, or 5 pass/5 fail) are very likely to be distributions representing the same real distribution for this school. There is a great deal of doubt about whether the school did, in fact, pass or fail the test. Therefore, in this subgroup, the judgment is not statistically reliable.

In the next to the last subgroup (J), 40 students passed the test by more than 1 SEM. However, 20 students passed within 1 SEM and 15 students failed within 1 SEM. In order for 75 of the students to pass the test, all 15 of the failing students would have to have passed. Statistically, a likelihood of .00 means that it is extremely unlikely that all 15 students actually have the knowledge and skills to be

at the proficient level (because the probability is smaller, and therefore less likely, than .05). There is not much doubt about whether the school failed the test. In this situation, the judgment is statistically reliable.

As can be seen from the above table, in general, unless a substantial proportion of students needs to move from “failed” to “passed,” the two distributions compared (i.e., the observed distribution and the next occurring distribution that changes the school’s status) are statistically the same, and therefore the judgment of the school can be deemed “unreliable.”

The test used in the above calculations is the Pearson Chi-square test for association. This tests whether the two distributions are from the same distribution. There are, however, assumptions made when using the Pearson Chi-square, which include:

1. Each and every observation is independent of each other observation. (Individual student scores are not dependent upon each other.)
2. Each observation qualifies for one and only one cell in the table. (Each student can either pass or fail.)
3. The sample size is large.

(Hays, 1994)

In a two-by-two table such as those used here, Hays recommends an expected frequency of 10 in each cell. In certain cases, the impact of fewer numbers in some cells should be investigated.

Can This be Simplified?

All these formulas and statistics easily become overwhelming. Even though the computers have no trouble calculating them, the processes become obscure and difficult to explain. The following look-up table was created to illustrate how to simplify the calculations described in alternative 4.

To use the table, determine how many additional students would have needed to score above the cut point for the subgroup to meet the annual objective. Add this number to the students scoring above but within n SEM of the cut point to get the MINIMUM. If this MINIMUM is equal to or higher than the number in the table below (Table 16), then the subgroup’s result is statistically reliable—and the subgroup did not meet its annual objective.

Table 16: Look-Up Table for Statistical Reliability											
One-Tailed Test at .05 Confidence Level	Number of Students Scoring ABOVE Criterion but Within $nSEM$										
	0	1	2	3	4	5	6	7	8	9	10
Number of Students Scoring ABOVE Criterion but Within $nSEM$	0										
	1										
	2	2									
	3	3	4	5	6						
	4	3	4	6	7	8	9	10	11	12	13
	5	3	5	6	7	8	10	11	12	13	14
	6	3	5	6	8	9	10	11	12	13	14
	7	4	5	7	8	9	10	11	12	13	14
	8	4	5	7	8	9	10	12	13	14	15
	9	4	6	7	8	9	11	12	13	14	15
	10	4	6	7	8	10	11	12	13	14	15

School Measurement Error

Sliding Scale

Procedure: Establish a sliding scale of minimums for total students in a subgroup based upon the variance of the percent proficient across all schools (or subgroups) in the state assessment and various group sizes. In other words, the larger the group, the closer the percent can be to the criterion and still be statistically reliable. Thus, a confidence interval is established for subgroups of each size. If the school's percent is above the annual objective by at least the size of the confidence level, then the school's status is statistically reliable. In the absence of a minimum subgroup size, this method can declare very large groups as unreliable if their percent proficient is very close to the criterion. This model was applied to Maryland's state test by Yen (1997). Maryland's state assessment included performance measures and item sampling strategies that may have not yielded usable individual student scores to which a standard error of measurement could be applied. Others have described methods for calculating the parameters used in this type of analysis even if they did not specifically relate their work to this application (Rogosa, 1999).

With this approach, a confidence interval is empirically calculated for each subgroup size (e.g., 2 percentage points for groups with 100 students, 8 percentage points for groups with 30 students, and 12 percentage points for groups with 10 students). These confidence intervals are based upon the distribution of all schools' (of the same size) percent of students above the criterion for proficiency. The mean

and standard deviation of this distribution is used to calculate the probability that a school's percent at or above proficiency could have been made if that school had been randomly drawn from the entire population of schools.

Model I (Schools fixed, forms random, pupils sampled from a finite population):

$$SE^2(PAC) = \frac{\text{---}_f}{F} + \frac{\text{---}_{sf}}{F} + \frac{\text{---}_w}{n_T} \cdot A + \frac{\text{---}_w}{n_T} (1-R)$$

$$\text{---}_f = \{MS(f) - A \cdot MS(w)\} / S \cdot n^*$$

$$\text{---}_{sf} = \{MS(sf) - A \cdot MS(w)\} / n^*$$

$$\text{---}_w = MS(w)$$

Where

F=number of forms

n*=number of pupils per form per school in the ANOVA

n_T=the typical total number of pupils tested per school

S=number of schools in ANOVA

A=state average proportion of eligible pupils who did not provide scores

R=mean (across forms) of the coefficient alpha values for that grade and content area

Model II (Schools fixed, forms random, pupils sampled from an infinite population):

$$SE^2(PAC) = \frac{\text{---}_f}{F} + \frac{\text{---}_{sf}}{F} + \frac{\text{---}_w}{n_T}$$

$$\text{---}_f = \{MS(f) - MS(w)\} / S \cdot n^*$$

$$\text{---}_{sf} = \{MS(sf) - MS(w)\} / n^*$$

Other terms remain unchanged from Model I.

Model III (Schools random, forms random, pupils sampled from an infinite population):

$$\text{---}_f = \{MS(f) - MS(sf)\} / S \cdot n^*$$

Other terms remain unchanged from Model II.

(Yen, 1997, page 13)

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More complete references and documents related to No Child Left Behind can be found at: www.espsolutionsgroup.com

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ESP Optimal Reference Guide:

FERPA: Catch 1 through 22

Since this paper was written in 2006, many questions have been raised by State Education Agencies that are developing longitudinal data systems. In addition, questions have been raised by postsecondary institutions concerning the release of information from student records that could affect the safety and health of students and others. In March 2008 the Family Policy Compliance Office of the U.S. Department of Education published proposed revisions to regulations concerning the implementation of the Family Educational Rights and Privacy Act (FERPA). These proposed revisions are under review and should be finalized in the summer of 2008.

Most of the issues in this paper continue to be problems associated with the implementation of FERPA and were not addressed in the proposed revisions to regulations. Thus it is important for education agencies to continue to pursue clarifications of FERPA and to recommend changes to the law itself. The few items that have been addressed in the proposed revisions are described at the end of the paper.

The Case for Rewriting FERPA

FERPA (Family Educational Rights and Privacy Act) has protected the private information of students and provided access to education records by parents since 1977. A 1997 revision left in place the extant ambiguity and competing purposes of the original mandate. After so many years in force, the law needs to be brought into line with today's technology and information practices. Thank you, FERPA, for the rights you have preserved, but in all those years, we have been unable to articulate clear case law, precedents, and advance interpretations. FERPA's Compliance Office acts to resolve one complaint at a time. The constraints of the law are cited as the cause for this reticence. LEAs, SEAs, and the software vendors that provide them information systems have found this scarcity of guidance to be frustrating.

This paper is a call for FERPA to be updated by Congress to address these frustrations. The goal of the revision should be to ensure that the confidential information FERPA is intended to protect is protected while avoiding any undue restriction of information that contributes to data driven decision making that can improve the education of individual students.

The time has arrived for FERPA to be modernized. In 1977 (remember President Carter; primitive DOS or COBOL-based student information systems only in the advanced schools, paper records everywhere; state education agencies (SEAs) not maintaining individual student-level information systems; rotary phones in schools; silver coins in circulation; card punches and readers; IBM mainframes slower and with less memory than a laptop has today?) the world of education data was much simpler than it is now. FERPA as a law could only be written in the context of how education data (paper records) were created and shared at the time. Today's technology and automated information systems have created much more data, many more practical uses for the data, and many more people wanting the data.



FERPA is the Family Educational Rights and Privacy Act. Background information about the law and the FERPA Compliance Office is available at <http://www.ed.gov/policy/gen/guid/fpco/ferpa>.



ESP has assisted SEAs in the development of data access and use policies to comply with FERPA while meeting the objectives of new information systems.

To make the case for rewriting FERPA, this paper uses illustrations of conundrums that educators face when following FERPA.

FERPA Conundrum: A person cannot inspect educational records for the purpose of determining which persons have the right under FERPA to inspect those records because if the records contain personally identifiable information protected under FERPA which that person does not have the right to access, then that information cannot be inspected. The act of looking at the information to determine if one has the right to see it is not allowed.

Real-life example: A school district mailed out 35,000 report cards using the wrong addresses. Parents who opened the envelopes discovered they should not be seeing the grades of someone else's child.

FERPA Universal Access Loophole: A person needing to determine who should have access to education data has a need to know the data; therefore, that person can look at a student's educational record.

Real-life example: A school clerk enrolling a new student inspects the records that come from the student's prior school to determine who needs to see them.

Neither of these scenarios really makes sense, but they illustrate how one can get confused just thinking about who can view education data.

Catch 22's of FERPA

The phrase "Catch 22" is commonly used to describe a no-win situation. A Catch-22 situation is frustrating to everyone because the attempt to perform an action prevents it from happening.

If there is a rule, there is always an exception to it. In Joseph Heller's 1961 novel *Catch 22*, Yossarian cannot be excused from the war for being crazy because his concern for his own life proves that he is not crazy. The catch is attributed to those in power to ensure their power, and it is binding upon those who do not have power. In a situation where everything seems to be working out, *Catch-22* proves Robert Burns's conclusion that the best laid plans of mice and men often go awry.

The insidious aspect of Catch 22 is that it does not exist in reality, but because everyone believes that it does, it does. With FERPA, the 22 catches described in this paper appear initially to be problematic. In reality some may not be real, some may have simple solutions, and others require a change in the law to ensure overly cautious people do not interpret FERPA to the disadvantage of the students who are intended to be protected.

The full text of the law is available at <http://www.ed.gov/policy/gen/guid/fpco/ferpa> so you can see for yourself how certain requirements are currently worded.

Today, electronic records fly between schools, Local Education Agencies (LEAs), states, and the federal government (well, almost). The capacity of education information systems to collect, process, and exchange individual student records has exploded. Decision support systems are giving direct access to individual-level data for teachers and others to run custom queries. Students are moving from one LEA to another and expecting their historical records to follow them (with some exceptions).

FERPA needs to be updated in several crucial respects.

1. Descriptive or demographic information needs to be exempted from confidentiality protection.
For example, why not publish race/ethnic frequencies when they merely represent enrollments? What is the harm in publishing a count of 2 Hispanic students enrolled in grade three in a school?
2. Publishing 100% or 0% should be allowed when the group size exceeds the adopted minimum for confidentiality.
Yes, everyone in the group will know how everyone else is classified, but this is typically the most essential information for accountability.
3. A set of directory and enrollment data elements should be established nationwide to allow interstate identification of individual students for the purpose of exchanging education records.
Parents can be informed, and student identification can be verified for records to be exchanged.

4. The Family Policy Compliance Office at the U.S. Department of Education (USED) should be empowered to develop and publish guidance for LEAs and SEAs.
Nothing would help more to clarify FERPA for those having to follow it. While some information has been published, still more is needed.
5. FERPA should resolve the issue of data ownership between the LEA and the SEA.
The data within an SEA's information system should be designated as owned by the entity that originally collected or created them—regardless of data stewardship. The SEA data steward should be required to certify that the data they possess are identical to what was provided them by the LEA.
6. FERPA should clarify what “reasonable effort” means related to suppressed cells being restored from other data provided.
How difficult must it be made for someone to derive suppressed values from others in the same table or publication?

Two recommendations made in the 2006 paper have been addressed in proposed regulations for implementing FERPA in 2008.

1. States that manage cumulative historical data records for individual students need to be allowed to provide those records to new schools.
SEAs were originally advised that they could not provide assessment scores for individual students when they were in prior schools. The implication was that, even though the SEA managed the statewide testing program and contracts directly for the scoring and reporting of the data, the SEA could not provide those scores to the receiving LEA when the student moved. Now, proposed revisions indicate that SEAs may pass along a student's prior record to a LEA where the student has enrolled on behalf of the sending LEA. This means that the receiving LEA will receive not only data from the sending LEA, but also from any previous LEAs from whom the SEA received data for the student. And assessment scores maintained by the SEA can be a part of that record.
2. FERPA should clarify that unmasked data may be provided upward to the next level of government, and that level of government inherits the responsibility to protect privacy—both in aggregate reporting and in responding to requests for data.
LEAs and SEAs are concerned that they are still responsible if they provide unmasked data to a higher authority and that authority fails to mask all the information they would have. The proposed revisions make it clear that the SEA bears responsibility for the security and confidentiality of data received from the LEAs, including in aggregate reporting and in responding to requests for data.

Solutions and Strategies for Catch 1 to 22

Here are a few strategies and possible solutions that may help avoid FERPA's catches. *En mass*, these catches illustrate the challenge LEAs and SEAs face interpreting and following this outdated 1977 law.

Table 1: Solutions to Avoiding FERPA's Catches

Situation	Catch	Result	Solution or Strategy
1. We need to know if a school has no students at the proficient level, but...	If zero students are in a reported category...	We can't report the category because this identifies each individual student as not being in this category.	Solution: Report ranges instead of exact counts. *
2. We need to recognize schools where all students have performed to our standards, but...	If 100% of all students are in a category...	We can't report the category because this identifies each individual student as being in this category.	Solution: Report ranges instead of exact counts. *
3. An SEA needs to use all directory information possible when resolving duplicate student records across the state, but...	If the data elements defined as directory information by the LEA differ from the SEA's...	The SEA can't provide all of its own directory information without violating an LEA's policy.	Solution: The SEA should seek legislation to establish a common minimum set of directory data statewide.
4. An LEA needs to use all directory information possible when requesting records from an LEA in another state, but...	If one state's data elements defined as directory information differ from another's...	We can't share data (in a student locator system) across states without showing confidential data.	Solution: User portals should practice identity management to know which data elements to display for users from each state. Better Solution: Change FERPA.
5. When students move to new LEAs within a state, they need their historical assessment results to follow them, but...	If the SEA is the holder of historical assessment records across all LEAs...	Assessment scores from one LEA cannot be shared by the SEA with a new LEA.	Strategy: This is common practice in many states already. Wait for a protest. Better Strategy: Change FERPA.
6. An SEA masks values when submitting data to Education Data Exchange Network (EDEN), but...	If EDEN receives a file with masked values for some cells...	Those missing values cannot be used for aggregations even if the new aggregations will follow EDEN's masking rules for confidentiality.	Solution: EDEN must collect unmasked values from all SEAs and establish a trusted relationship to protect confidentiality.

Table 1: Solutions to Avoiding FERPA's Catches			
Situation	Catch	Result	Solution or Strategy
7. Values in a published table are masked, but...	If masked fields are related to other unmasked fields in the table...	Masked fields might be recalculated.	Solution: Adequate masking rules must be implemented to avoid recalculations. *
8. Values across all tables in a publication are masked, but...	If other published reports contain data that enable recalculations...	We can't publish our own tables without masking even more data based upon other publications.	Solution: Adequate masking rules must be implemented to avoid recalculations. *
9. Masking is done to prevent recalculation with reasonable effort, but...	If reasonable effort does not have a commonly accepted definition...	We are vulnerable to second guessing.	Strategy: Adopt a statewide definition of reasonable effort. Better Strategy: Change FERPA.
10. Extreme masking is done to prevent recalculation by a zealot, but...	If too many fields are suppressed...	We can't make data driven decisions on missing data.	Strategy: Accept that this may happen. If too many values are masked, the information being reported loses its usefulness for decision making.
11. Agencies use case law or published guidelines to inform their policy making, but...	If the FERPA Compliance Office is asked for cases and guidelines...	There are no guidelines or case law provided because the Compliance Office does not want a decision made in one case to be misapplied when circumstances are different.	Solution: Change FERPA. Strategy: Review past FERPA decisions. **
12. Agencies want to have their current policies reviewed, but	If the FERPA Compliance Office is asked for a review...	We are informed that a violation must occur and a protest must be made to get a ruling.	Solution: Change FERPA. Strategy: Request technical assistance and hope for the best, or review past FERPA decisions. **
13. Agencies want prior clearance before implementing an important policy, but...	If the FERPA Compliance Office is asked for prior clearance...	No prior clearance is available.	Solution: Change FERPA. Strategy: Review past FERPA decisions. **

Table 1: Solutions to Avoiding FERPA's Catches

Situation	Catch	Result	Solution or Strategy
14. Agencies have practices in place that have become traditional and generally accepted, but...	If a protest is filed with the FERPA Compliance Office...	No statute of limitations is available to allow a practice to be considered acceptable.	Strategy: Continue. Unless a protest is filed and upheld, there is no change required.
15. The LEA must abide by parent requests made at the school level, but...	If a parent request at the school is not passed along to the LEA...	The LEA may violate the request.	Solution: Design information systems to share parent requests.
16. The SEA must abide by parent requests made at the LEA level, but...	If a parent request at the LEA is not passed along to the SEA...	The SEA may violate the request.	Solution: Design information systems to share parent requests.
17. A parent or a student turning 18 can change their minds about allowing directory information to be published, but...	If a parent changes his/her mind, or a student reaches majority and changes the request,...	The agency may have already published the data, or may have the data distributed throughout its data repositories.	Solution: Design information systems to allow changes.
18. The same person makes two identical requests for a data file from an education agency, but...	If one request is as a parent and the other is as a researcher ...	The parent request may be denied and the researcher request may be approved.	Solution: Be a researcher.
19. Different levels of government make their own masking rules, but...	If confidential data at the individual student level are shared...	Different levels of government may not mask to the satisfaction of others.	Solution: Each higher level of government must adopt an equal or higher standard than anyone at a lower level.
20. Higher minimum cell sizes are selected to ensure greater protection of individual student's personal information, but	If the data would result in decisions that benefit the children in the group...	There is more protection for the children and less help for the children.	Strategy: Keep minimum cell sizes as low as possible. *
21. Even demographic elements such as gender are considered personally identifiable, but	If demographic elements are among the directory elements masked and they are useful for cross tabulations...	Data driven decision making is hindered.	Solution: Adopt a policy that makes demographic elements directory elements.
22. NCLB requires compliance with FERPA, but	If cells with 100% of the students in them are masked...	NCLB cannot report its ultimate success in 2014 when 100% of the students are proficient.	Strategy: Report 100% anyway.

* Confidentiality and Reliability Rules for Reporting Education Data, The Optimal Reference Guide by Glynn D. Ligon, Ph.D. and Barbara S. Clements, Ph.D. (Available at www.espsg.com, My ESP Page)

** Guidelines for Accessing Student Records in a State Longitudinal Database by Barbara S. Clements, Ph.D. and Greg Nadeau (available at www.espsg.com/resources.php.)

Two of these 22 situations have been addressed in USED's proposed revisions to regulations.

- Number five relates to the sharing of historical data about a student by a SEA with an LEA that enrolls the new student. This is specifically allowed in the new regulations. SEAs may provide a receiving LEA a copy of a student's record on behalf of the sending LEA.
- EDEN (Education Data Exchange Network) seeks to obtain un-masked data from SEAs so that complete data will be provided. EDEN, now called *EDFacts*, provides assurances to SEAs that small cell sizes will be avoided and other measures will be taken to ensure that individual students are not identified.

ATTACHMENT A – Family Education Rights and Privacy Act

[Code of Federal Regulations]
[Title 34, Volume 1, Parts 1 to 299]
[Revised as of July 1, 1997]
From the U.S. Government Printing Office via GPO Access
[CITE: 34CFR99]

TITLE 34--EDUCATION

PART 99--FAMILY EDUCATIONAL RIGHTS AND PRIVACY

Subpart A – General

Sec.

99.1 *To which educational agencies or institutions do these regulations apply?*

- (a) Except as otherwise noted in Sec. 99.10, this part applies to an educational agency or institution to which funds have been made available under any program administered by the Secretary, if—
 - (1) The educational institution provides educational services or instruction, or both, to students; or
 - (2) The educational agency provides administrative control of or direction of, or performs service functions for, public elementary or secondary schools or postsecondary institutions.
- (b) This part does not apply to an educational agency or institution solely because students attending that agency or institution receive non-monetary benefits under a program referenced in paragraph (a) of this section, if no funds under that program are made available to the agency or institution.
- (c) The Secretary considers funds to be made available to an educational agency or institution of funds under one or more of the programs referenced in paragraph (a) of this section—
 - (1) Are provided to the agency or institution by grant, cooperative agreement, contract, subgrant, or subcontract; or
 - (2) Are provided to students attending the agency or institution and the funds may be paid to the agency or institution by those students for educational purposes, such as under the Pell Grant Program and the Guaranteed Student Loan Program (titles IV-A-1 and IV-B, respectively, of the Higher Education Act of 1965, as amended).

- (d) If an educational agency or institution receives funds under one or more of the programs covered by this section, the regulations in this part apply to the recipient as a whole, including each of its components (such as a department within a university).

(Authority: 20 U.S.C. 1232g)

[53 FR 11943, Apr. 11, 1988, as amended at 61 FR 59295, Nov. 21, 1996]

Sec.

99.2 *What is the purpose of these regulations?*

The purpose of this part is to set out requirements for the protection of privacy of parents and students under section 444 of the General Education Provisions Act, as amended.

(Authority: 20 U.S.C. 1232g)

NOTE: 34 CFR 300.560-300.576 contain requirements regarding confidentiality of information relating to handicapped children who receive benefits under the Education of the Handicapped Act.

[53 FR 11943, Apr. 11, 1988, as amended at 61 FR 59295, Nov. 21, 1996]

Sec.

99.3 *What definitions apply to these regulations?*

The following definitions apply to this part:

"Act" means the Family Educational Rights and Privacy Act of 1974, as amended, enacted as section 444 of the General Education Provisions Act.

(Authority: 20 U.S.C. 1232g)

"Attendance" includes, but is not limited to:

(a) Attendance in person or by correspondence; and

(b) The period during which a person is working under a work-study program.

(Authority: 20 U.S.C. 1232g)

"Dates of attendance"

(a) The term means the period of time during which a student attends or attended an educational agency or institution. Examples of dates of attendance include an academic year, a spring semester, or a first quarter.

(b) The term does not include specific daily records of a student's attendance at an educational agency or institution.

(Authority: 20 U.S.C. 1232g (a)(5)(A))

"Directory information" means information contained in an education record of a student that would not generally be considered harmful or an invasion of privacy if disclosed. It includes, but is not limited to, the student's name, address, telephone listing, electronic mail address, photograph, date and place of birth, major field of study, dates of attendance, grade level, enrollment status (e.g., undergraduate or graduate; full-time or part-time), participation in officially recognized activities and sports, weight and height of members of athletic teams, degrees, honors and awards received, and the most recent educational agency or institution attended.

(Authority: 20 U.S.C. 1232g(a)(5)(A))

"Disciplinary action or proceeding" means the investigation, adjudication, or imposition of sanctions by an educational agency or institution with respect to an infraction or violation of the internal rules of conduct applicable to students of the agency or institution.

"Disclosure" means to permit access to or the release, transfer, or other communication of personally identifiable information contained in education records to any party, by any means, including oral, written, or electronic means.

(Authority: 20 U.S.C. 1232g(b)(1))

"Educational agency or institution" means any public or private agency or institution to which this part applies under § 99.1(a).

(Authority: 20 U.S.C. 1232g (a)(3))

"Education records"

(a) The term means those records that are:

(1) Directly related to a student; and

(2) Maintained by an educational agency or institution or by a party acting for the agency or institution.

(b) The term does not include:

(1) Records that are kept in the sole possession of the maker, are used only as a personal memory aid, and are not accessible or revealed to any other person except a temporary substitute for the maker of the record.

(2) Records of the law enforcement unit of an educational agency or institution, subject to the provisions of § 99.8.

(3)(i) Records relating to an individual who is employed by an educational agency or institution, that:

(A) Are made and maintained in the normal course of business;

(B) Relate exclusively to the individual in that individual's capacity as an employee; and

(C) Are not available for use for any other purpose.

(ii) Records relating to an individual in attendance at the agency or institution who is employed as a result of his or her status as a student are education records and not excepted under paragraph (b)(3)(i) of this definition.

(4) Records on a student who is 18 years of age or older, or is attending an institution of postsecondary education, that are:

(i) Made or maintained by a physician, psychiatrist, psychologist, or other recognized professional or paraprofessional acting in his or her professional capacity or assisting in a paraprofessional capacity;

(ii) Made, maintained, or used only in connection with treatment of the student; and

(iii) Disclosed only to individuals providing the treatment. For the purpose of this definition, "treatment" does not include remedial educational activities or activities that are part of the program of instruction at the agency or institution; and

(5) Records that only contain information about an individual after he or she is no longer a student at that agency or institution.

(Authority: 20 U.S.C. 1232g(a)(4))

"Eligible student" means a student who has reached 18 years of age or is attending an institution of postsecondary education.

(Authority: 20 U.S.C. 1232g(d))

"Institution of postsecondary education" means an institution that provides education to students beyond the secondary school level; "secondary school level" means the educational level (not beyond grade 12) at which secondary education is provided as determined under State law.

(Authority: 20 U.S.C. 1232g(d))

"Parent" means a parent of a student and includes a natural parent, a guardian, or an individual acting as a parent in the absence of a parent or a guardian.

(Authority: 20 U.S.C. 1232g)

"Party" means an individual, agency, institution, or organization.

(Authority: 20 U.S.C. 1232g(b)(4)(A))

"Personally identifiable information" includes, but is not limited to:

(Authority: 20 U.S.C. 1232g)

- (a) The student's name;
- (b) The name of the student's parent or other family member;
- (c) The address of the student or student's family;
- (d) A personal identifier, such as the student's social security number or student number;
- (e) A list of personal characteristics that would make the student's identity easily traceable; or
- (f) Other information that would make the student's identity easily traceable.

"Record" means any information recorded in any way, including, but not limited to, hand writing, print, computer media, video or audio tape, film, microfilm, and microfiche.

(Authority: 20 U.S.C. 1232g)

"Secretary" means the Secretary of the U.S. Department of Education or an official or employee of the Department of Education acting for the Secretary under a delegation of authority.

(Authority: 20 U.S.C. 1232g)

"Student," except as otherwise specifically provided in this part, means any individual who is or has been in attendance at an educational agency or institution and regarding whom the agency or institution maintains education records.

(Authority: 20 U.S.C. 1232g(a)(6))

**Sec.
99.4 *What are the rights of parents?***

An educational agency or institution shall give full rights under the Act to either parent, unless the agency or institution has been provided with evidence that there is a court order, State statute, or legally binding document relating to such matters as divorce, separation, or custody that specifically revokes these rights.

(Authority: 20 U.S.C. 1232g)

**Sec.
99.5 *What are the rights of students?***

(a) When a student becomes an eligible student, the rights accorded to, and consent required of, parents under this part transfer from the parents to the student.

(b) The Act and this part do not prevent educational agencies or institutions from giving students rights in addition to those given to parents.

(c) An individual who is or has been a student at an educational institution and who applies for admission at another component of that institution does not have the rights under this part with respect to records maintained by that other component, including records maintained in connection with the student's application for admission, unless the student is accepted and attends that other component of the institution.

(Authority: 20 U.S.C. 1232g(d))

**Sec.
99.6 *[Reserved]***

**Sec.
99.7 *What must an educational agency or institution include in its annual notification?***

(a)(1) Each educational agency or institution shall annually notify parents of students currently in attendance, or eligible students currently in attendance, of their rights under the Act and this part.

(2) The notice must inform parents or eligible students that they have the right to-

(i) Inspect and review the student's education records;

(ii) Seek amendment of the student's education records that the parent or eligible student believes to be inaccurate, misleading, or otherwise in violation of the student's privacy rights;

(iii) Consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that the Act and § 99.31 authorize disclosure without consent; and

(iv) File with the Department a complaint under §§ 99.63 and 99.64 concerning alleged failures by the educational agency or institution to comply with the requirements of the Act and this part.

(3) The notice must include all of the following:

(i) The procedure for exercising the right to inspect and review education records.

(ii) The procedure for requesting amendment of records under § 99.20.

(iii) If the educational agency or institution has a policy of disclosing education records under § 99.31 (a) (1), a specification of criteria for determining who constitutes a school official and what constitutes a legitimate educational interest.

(b) An educational agency or institution may provide this notice by any means that are reasonably likely to inform the parents or eligible students of their rights.

(1) An educational agency or institution shall effectively notify parents or eligible students who are disabled.

(2) An agency or institution of elementary or secondary education shall effectively notify parents who have a primary or home language other than English. (Approved by the Office of Management and Budget under control number 1880-0508)

(Authority: 20 U.S.C. 1232g (e) and (f))

**Sec.
99.8**

What provisions apply to records of a law enforcement unit?

(a) (1) "Law enforcement unit" means any individual, office, department, division, or other component of an educational agency or institution, such as a unit of commissioned police officers or non-commissioned security guards, that is officially authorized or designated by that agency or institution to-

(i) Enforce any local, State, or Federal law, or refer to appropriate authorities a matter for enforcement of any local, State, or Federal law against any individual or organization other than the agency or institution itself; or

(ii) Maintain the physical security and safety of the agency or institution.

(2) A component of an educational agency or institution does not lose its status as a "law enforcement unit" if it also performs other, non-law enforcement functions for the agency or institution, including investigation of incidents or conduct that constitutes or leads to a disciplinary action or proceedings against the student.

(b) (1) Records of law enforcement unit means those records, files, documents, and other materials that are-

(i) Created by a law enforcement unit;

(ii) Created for a law enforcement purpose; and

(iii) Maintained by the law enforcement unit.

(2) Records of law enforcement unit does not mean-

(i) Records created by a law enforcement unit for a law enforcement purpose that are maintained by a component of the educational agency or institution other than the law enforcement unit; or

(ii) Records created and maintained by a law enforcement unit exclusively for a non-law enforcement purpose, such as a disciplinary action or proceeding conducted by the educational agency or institution.

(c)(1) Nothing in the Act prohibits an educational agency or institution from contacting its law enforcement unit, orally or in writing, for the purpose of asking that unit to investigate a possible violation of, or to enforce, any local, State, or Federal law.

(2) Education records, and personally identifiable information contained in education records, do not lose their status as education records and remain subject to the Act, including the disclosure provisions of § 99.30, while in possession of the law enforcement unit.

(d) The Act neither requires nor prohibits the disclosure by any educational agency or institution of its law enforcement unit records.

(Authority: 20 U.S.C. 1232g(a)(4)(B)(ii))

Subpart B – What Are the Rights of Inspection and Review of Education Records?

Sec.

99.10 *What rights exist for a parent or eligible student to inspect and review education records?*

(a) Except as limited under § 99.12, a parent or eligible student must be given the opportunity to inspect and review the student's education records. This provision applies to

(1) Any educational agency or institution; and

(2) Any State educational agency (SEA) and its components.

(i) For the purposes of subpart B of this part, an SEA and its components constitute an educational agency or institution.

(ii) An SEA and its components are subject to subpart B of this part if the SEA maintains education records on students who are or have been in attendance at any school of an educational agency or institution subject to the Act and this part.

(b) The educational agency or institution, or SEA or its component, shall comply with a request for access to records within a reasonable period of time, but not more than 45 days after it has received the request.

(c) The educational agency or institution, or SEA or its component, shall respond to reasonable requests for explanations and interpretations of the records.

(d) If circumstances effectively prevent the parent or eligible student from exercising the right to inspect and review the student's education records, the educational agency or institution, or SEA or its component, shall-

- (1) Provide the parent or eligible student with a copy of the records requested; or
- (2) Make other arrangements for the parent or eligible student to inspect and review the requested records.
- (e) The educational agency or institution, or SEA or its component, shall not destroy any education records if there is an outstanding request to inspect and review the records under this section.
- (f) While an educational agency or institution is not required to give an eligible student access to treatment records under paragraph (b)(4) of the definition of "Education records" in § 99.3, the student may have those records reviewed by a physician or other appropriate professional of the student's choice.

(Authority: 20 U.S.C. 1232g(a)(1) (A) and (B))

Sec.

99.11 *May an educational agency or institution charge a fee for copies of education records?*

- (a) Unless the imposition of a fee effectively prevents a parent or eligible student from exercising the right to inspect and review the student's education records, an educational agency or institution may charge a fee for a copy of an education record which is made for the parent or eligible student.
- (b) An educational agency or institution may not charge a fee to search for or to retrieve the education records of a student.

(Authority: 20 U.S.C. 1232g(a)(1))

Sec.

99.12 *What limitations exist on the right to inspect and review records?*

- (a) If the education records of a student contain information on more than one student, the parent or eligible student may inspect and review or be informed of only the specific information about that student.
- (b) A postsecondary institution does not have to permit a student to inspect and review education records that are:
 - (1) Financial records, including any information those records contain, of his or her parents;

(2) Confidential letters and confidential statements of recommendation placed in the education records of the student before January 1, 1975, as long as the statements are used only for the purposes for which they were specifically intended; and

(3) Confidential letters and confidential statements of recommendation placed in the student's education records after January 1, 1975, if:

(i) The student has waived his or her right to inspect and review those letters and statements; and

(ii) Those letters and statements are related to the student's:

(A) Admission to an educational institution;

(B) Application for employment; or

(C) Receipt of an honor or honorary recognition.

(c)(1) A waiver under paragraph (b)(3)(i) of this section is valid only if:

(i) The educational agency or institution does not require the waiver as a condition for admission to or receipt of a service or benefit from the agency or institution; and

(ii) The waiver is made in writing and signed by the student, regardless of age.

(2) If a student has waived his or her rights under paragraph (b)(3)(i) of this section, the educational institution shall:

(i) Give the student, on request, the names of the individuals who provided the letters and statements of recommendation; and

(ii) Use the letters and statements of recommendation only for the purpose for which they were intended.

(3)(i) A waiver under paragraph (b)(3)(i) of this section may be revoked with respect to any actions occurring after the revocation.

(ii) A revocation under paragraph (c)(3)(i) of this section must be in writing.

(Authority: 20 U.S.C. 1232g(a)(J) (A), (B), (C), and (D))

Subpart C – What Are the Procedures for Amending Education Records?

Sec.
99.20 ***How can a parent or eligible student request amendment of the student's education records?***

(a) If a parent or eligible student believes the education records relating to the student contain information that is inaccurate, misleading, or in violation of the student's rights of privacy, he or she may ask the educational agency or institution to amend the record.

(b) The educational agency or institution shall decide whether to amend the record as requested within a reasonable time after the agency or institution receives the request.

(c) If the educational agency or institution decides not to amend the record as requested, it shall inform the parent or eligible student of its decision and of his or her right to a hearing under § 99.21

(Authority: 20 U.S.C. 1232g(a)(2))

Sec.
99.21 ***Under what conditions does a parent or eligible student have the right to a hearing?***

(a) An educational agency or institution shall give a parent or eligible student, on request, an opportunity for a hearing to challenge the content of the student's education records on the grounds that the information contained in the education records is inaccurate, misleading, or in violation of the privacy rights of the student.

(b)(1) If, as a result of the hearing, the educational agency or institution decides that the information is inaccurate, misleading, or otherwise in violation of the privacy rights of the student, it shall:

(i) Amend the record accordingly; and (ii) Inform the parent or eligible student of the amendment in writing.

(2) If, as a result of the hearing, the educational agency or institution decides that the information in the education record is not inaccurate, misleading, or otherwise in violation of the privacy rights of the student, it shall inform the parent or eligible student of the right to place a statement in the record commenting on the contested information in the record or stating why he or she disagrees with the decision of the agency or institution, or both.

(c) If an educational agency or institution places a statement in the education records of a student under paragraph (b)(2) of this section, the agency or institution shall:

(1) Maintain the statement with the contested part of the record for as long as the record is maintained; and

(2) Disclose the statement whenever it discloses the portion of the record to which the statement relates.

(Authority: 20 U.S.C. 1232g(a)(2))

Sec.

99.22 What minimum requirements exist for the conduct of a hearing?

The hearing required by § 99.21 must meet, at a minimum, the following requirements:

(a) The educational agency or institution shall hold the hearing within a reasonable time after it has received the request for the hearing from the parent or eligible student.

(b) The educational agency or institution shall give the parent or eligible student notice of the date, time, and place, reasonably in advance of the hearing.

(c) The hearing may be conducted by any individual including an official of the educational agency or institution, who does not have direct interest in the outcome of the hearing.

(d) The educational agency or institution shall give the parent or eligible student a full and fair opportunity to present evidence relevant to the issues raised under § 99.21. The parent or eligible student may, at their own expense, be assisted or represented by one or more individuals of his or her own choice, including an attorney.

(e) The educational agency or institution shall make its decision in writing within a reasonable period of time after the hearing.

(f) The decision must be based solely on the evidence presented at the hearing, and must include a summary of the evidence and the reasons for the decision.

(Authority: 20 U.S.C. 1232g(a)(2))

Subpart D – May an Educational Agency or Institution Disclose Personally Identifiable Information From Education Records?

Sec.
99.30 ***Under what conditions is prior consent required to disclose information?***

(a) The parent or eligible student shall provide a signed and dated written consent before an educational agency or institution discloses personally identifiable information from the student's education records, except as provided in § 99.31.

(b) The written consent must:

(1) Specify the records that may be disclosed;

(2) State the purpose of the disclosure; and

(3) Identify the party or class of parties to whom the disclosure may be made.

(c) When a disclosure is made under paragraph (a) of this section:

(1) If a parent or eligible student so requests, the educational agency or institution shall provide him or her with a copy of the records disclosed; and

(2) If the parent of a student who is not an eligible student so requests, the agency or institution shall provide the student with a copy of the records disclosed.

(d) "Signed and dated written consent" under this part may include a record and signature in electronic form that-

(1) Identifies and authenticates a particular person as the source of the electronic consent; and

(2) Indicates such person's approval of the information contained in the electronic consent.

(Authority: 20 U.S.C. 1232g (b)(1) and (b)(2)(A))

Sec.
99.31 ***Under what conditions is prior consent not required to disclose information?***

(a) An educational agency or institution may disclose personally identifiable information from an education record of a student without the consent required by § 99.30 if the disclosure meets one or more of the following conditions:

(1) The disclosure is to other school officials, including teachers, within the agency or institution whom the agency or institution has determined to have legitimate educational interests.

(2) The disclosure is, subject to the requirements of § 99.34, to officials of another school, school system, or institution of postsecondary education where the student seeks or intends to enroll.

(3) The disclosure is, subject to the requirements of § 99.35, to authorized representatives of-

(i) The Comptroller General of the United States;

(ii) The Attorney General of the United States;

(iii) The Secretary; or

(iv) State and local educational authorities.

(4)(i) The disclosure is in connection with financial aid for which the student has applied or which the student has received, if the information is necessary for such purposes as to:

(A) Determine eligibility for the aid;

(B) Determine the amount of the aid;

(C) Determine the conditions for the aid; or

(D) Enforce the terms and conditions of the aid.

(ii) As used in paragraph (a)(4)(i) of this section, "financial aid" means a payment of funds provided to an individual (or a payment in kind of tangible or intangible property to the individual) that is conditioned on the individual's attendance at an educational agency or institution.

(Authority: 20 U.S.C. 1232g(b)(1)(D))

(5)(i) The disclosure is to State and local officials or authorities to whom this information is specifically-

(A) Allowed to be reported or disclosed pursuant to a State statute adopted before November 19, 1974, if the allowed reporting or disclosure concerns the juvenile justice system and the system's ability to effectively serve the student whose records are released; or

(B) Allowed to be reported or disclosed pursuant to a State statute adopted after November 19, 1974, subject to the requirements of § 99.38.

(ii) Paragraph (a)(5)(1) of this section does not prevent a State from further limiting the number or type of State or local officials to whom disclosures may be made under that paragraph.

(6)(i) The disclosure is to organizations conducting studies for, or on behalf of, educational agencies or institutions to:

(A) Develop, validate, or administer predictive tests;

(B) Administer student aid programs; or

(C) Improve instruction.

(ii) The agency or institution may disclose information under paragraph (a)(6)(i) of this section only if:

(A) The study is conducted in a manner that does not permit personal identification of parents and students by individuals other than representatives of the organization; and

(B) The information is destroyed when no longer needed for the purposes for which the study was conducted.

(iii) If this Office determines that a third party outside the educational agency or institution to whom information is disclosed under this paragraph (a)(6) violates paragraph (a)(6)(ii)(B) of this section, the educational agency or institution may not allow that third party access to personally identifiable information from education records for at least five years.

(iv) For the purposes of paragraph (a)(6) of this section, the term "organization" includes, but is not limited to, Federal, State, and local agencies, and independent organizations.

(7) The disclosure is to accrediting organizations to carry out their accrediting functions.

(8) The disclosure is to parents, as defined in § 99.3, of a dependent student, as defined in section 152 of the Internal Revenue Code of 1986.

(9)(i) The disclosure is to comply with a judicial order or lawfully issued subpoena.

(ii) The educational agency or institution may disclose information under paragraph (a)(9)(i) of this section only if the agency or institution makes a

reasonable effort to notify the parent or eligible student of the order or subpoena in advance of compliance, so that the parent or eligible student may seek protective action, unless the disclosure is in compliance with-

(A) A Federal grand jury subpoena and the court has ordered that the existence or the contents of the subpoena or the information furnished in response to the subpoena not be disclosed; or

(B) Any other subpoena issued for a law enforcement purpose and the court or other issuing agency has ordered that the existence or the contents of the subpoena or the information furnished in response to the subpoena not be disclosed.

(iii) (A) If an educational agency or institution initiates legal action against a parent or student, the educational agency or institution may disclose to the court, without a court order or subpoena, the education records of the student that are relevant for the educational agency or institution to proceed with the legal action as plaintiff.

(B) If a parent or eligible student initiates legal action against an educational agency or institution, the educational agency or institution may disclose to the court, without a court order or subpoena, the student's education records that are relevant for the educational agency or institution to defend itself.

(10) The disclosure is in connection with a health or safety emergency, under the conditions described in § 99.36.

(11) The disclosure is information the educational agency or institution has designated as "directory information," under the conditions described in § 99.37.

(12) The disclosure is to the parent of a student who is not an eligible student or to the student.

(13) The disclosure, subject to the requirements in § 99.39, is to a victim of an alleged perpetrator of a crime of violence or a non-forcible sex offense. The disclosure may only include the final results of the disciplinary proceeding conducted by the institution of postsecondary education with respect to that alleged crime or offense. The institution may disclose the final results of the disciplinary proceeding, regardless of whether the institution concluded a violation was committed.

(14)(i) The disclosure, subject to the requirements in § 99.39, is in connection with a disciplinary proceeding at an institution of postsecondary education. The institution must not disclose the final results of the disciplinary proceeding unless it determines that

(A) The student is an alleged perpetrator of a crime of violence or non-forcible sex offense; and

(B) With respect to the allegation made against him or her, the student has committed a violation of the institution's rules or policies.

(ii) The institution may not disclose the name of any other student, including a victim or witness, without the prior written consent of the other student.

(iii) This section applies only to disciplinary proceedings in which the final results were reached on or after October 7, 1998.

(15)(i) The disclosure is to a parent of a student at an institution of postsecondary education regarding the student's violation of any Federal, State, or local law, or of any rule or policy of the institution, governing the use or possession of alcohol or a controlled substance if-

(A) The institution determines that the student has committed a disciplinary violation with respect to that use or possession; and

(B) The student is under the age of 21 at the time of the disclosure to the parent.

(ii) Paragraph (a)(15) of this section does not supersede any provision of State law that prohibits an institution of postsecondary education from disclosing information.

(b) Paragraph (a) of this section does not forbid an educational agency or institution from disclosing, nor does it require an educational agency or institution to disclose, personally identifiable information from the education records of a student to any parties under paragraphs (a)(1) through (11), (13), (14), and (15) of this section.

(Authority: 20 U.S.C. 1232g(a)(5)(A), (b)(1), (b)(2)(B), (b)(6), (h) and (i))

Sec.

99.32 What recordkeeping requirements exist concerning requests and disclosures?

(a)(I) An educational agency or institution shall maintain a record of each request for access to and each disclosure of personally identifiable information from the education records of each student.

(2) The agency or institution shall maintain the record with the education records of the student as long as the records are maintained.

(3) For each request or disclosure the record must include:

(i) The parties who have requested or received personally identifiable information from the education records; and

(ii) The legitimate interests the parties had in requesting or obtaining the information.

(b) If an educational agency or institution discloses personally identifiable information from an education record with the understanding authorized under § 99.33(b), the record of the disclosure required under this section must include;

(1) The names of the additional parties to which the receiving party may disclose the information on behalf of the educational agency or institution; and

(2) The legitimate interests under § 99.31 which each of the additional parties has in requesting or obtaining the information.

(c) The following parties may inspect the record relating to each student:

(1) The parent or eligible student.

(2) The school official or his or her assistants who are responsible for the custody of the records.

(3) Those parties authorized in § 99.31(a)(1) and (3) for the purposes of auditing the recordkeeping procedures of the educational agency or institution.

(d) Paragraph (a) of this section does not apply if the request was from, or the disclosure was to:

(1) The parent or eligible student;

(2) A school official under § 99.31 (a)(1);

(3) A party with written consent from the parent or eligible student;

(4) A party seeking directory information; or

(5) A party seeking or receiving the records as directed by a Federal grand jury or other law enforcement subpoena and the issuing court or other issuing agency has ordered that the existence or the contents of the subpoena or the information furnished in response to the subpoena not be disclosed.

(Approved by the Office of Management and Budget under control number 1880-0508)

(Authority: 20 U.S.C. 1232g(b)(1) and (b)(4)(A))

Sec.

99.33 What limitations apply to the redisclosure of information?

(a)(I) An educational agency or institution may disclose personally identifiable information from an education record only on the condition that the party to whom the information is disclosed will not disclose the information to any other party without the prior consent of the parent or eligible student.

(2) The officers, employees, and agents of a party that receives information under paragraph (a)(I) of this section may use the information, but only for the purposes for which the disclosure was made.

(b) Paragraph (a) of this section does not prevent an educational agency or institution from disclosing personally identifiable information with the understanding that the party receiving the information may make further disclosures of the information on behalf of the educational agency or institution if:

(1) The disclosures meet the requirements of § 99.31; and

(2) The educational agency or institution has complied with the requirements of § 99.32(b).

(c) Paragraph (a) of this section does not apply to disclosures made to parents of dependent students under § 99.31(a)(8), to disclosures made pursuant to court orders, lawfully issued subpoenas, or litigation under § 99.31(a)(9), to disclosures of directory information under § 99.31(a)(11), to disclosures made to a parent or student under § 99.31(a)(12), to disclosures made in connection with a disciplinary proceeding under § 99.31(a)(14), or to disclosures made to parents under § 99.31(a)(15).

(d) Except for disclosures under § 99.31(a)(9), (11) and (12), an educational agency or institution shall inform a party to whom disclosure is made of the requirements of this section.

(e) If this Office determines that a third party improperly rediscloses personally identifiable information from education records in violation of § 99.33(a) of this section, the educational agency or institution may not allow that third party access to personally identifiable information from education records for at least five years.

(Authority: 20 U.S.C. 1232g(b)(4)(B))

Sec.

99.34 What conditions apply to disclosure of information to other educational agencies or institutions?

(a) An educational agency or institution that discloses an education record under § 99.31(a) (2) shall:

(1) Make a reasonable attempt to notify the parent or eligible student at the last known address of the parent or eligible student, unless:

(i) The disclosure is initiated by the parent or eligible student; or

(ii) The annual notification of the agency or institution under § 99.7 includes a notice that the agency or institution forwards education records to other agencies or institutions that have requested the records and in which the student seeks or intends to enroll:

(2) Give the parent or eligible student, upon request, a copy of the record that was disclosed; and

(3) Give the parent or eligible student, upon request, an opportunity for a hearing under Subpart c.

(b) An educational agency or institution may disclose an education record of a student in attendance to another educational agency or institution if:

(1) The student is enrolled in or receives services from the other agency or institution; and

(2) The disclosure meets the requirements of paragraph (a) of this section.

(Authority: 20 U.S.C. 1232g(b)(1)(B))

Sec.

99.35 What conditions apply to disclosure of information for Federal or State program purposes?

(a) The officials listed in § 99.31(a)(3) may have access to education records in connection with an audit or evaluation of Federal or State supported education programs, or for the enforcement of or compliance with Federal legal requirements which relate to those programs.

(b) Information that is collected under paragraph (a) of this section must:

(1) Be protected in a manner that does not permit personal identification of individuals by anyone except the officials referred to in paragraph (a) of this section; and

(2) Be destroyed when no longer needed for the purposes listed in paragraph (a) of this section.

(c) Paragraph (b) of this section does not apply if:

(1) The parent or eligible student has given written consent for the disclosure under § 99.30; or

(2) The collection of personally identifiable information is specifically authorized by Federal law.

(Authority: 20 U.S.C. 1232g(b)(3))

Sec.

99.36 *What conditions apply to disclosure of information in health and safety emergencies?*

(a) An educational agency or institution may disclose personally identifiable information from an education record to appropriate parties in connection with an emergency if knowledge of the information is necessary to protect the health or safety of the student or other individuals.

(b) Nothing in the Act or this part shall prevent an educational agency or institution from-

(1) Including in the education records of a student appropriate information concerning disciplinary action taken against the student for conduct that posed a significant risk to the safety or well-being of that student, other students, or other members of the school community;

(2) Disclosing appropriate information maintained under paragraph (b)(1) of this section to teachers and school officials within the agency or institution who the agency or institution has determined have legitimate educational interests in the behavior of the student; or

(3) Disclosing appropriate information maintained under paragraph (b)(1) of this section to teachers and school officials in other schools who have been determined to have legitimate educational interests in the behavior of the student.

(c) Paragraphs (a) and (b) of this section will be strictly construed.

(Authority: 20 U.S.C. 1232g (b)(1)(I) and (h))

Sec.

99.37 What conditions apply to disclosing directory information?

(a) An educational agency or institution may disclose directory information if it has given public notice to parents of students in attendance and eligible students in attendance at the agency or institution of:

(1) The types of personally identifiable information that the agency or institution has designated as directory information;

(2) A parent's or eligible student's right to refuse to let the agency or institution designate any or all of those types of information about the student designated as directory information; and

(3) The period of time within which a parent or eligible student has to notify the agency or institution in writing that he or she does not want any or all of those types of information about the student designated as directory information.

(b) An educational agency or institution may disclose directory information about former students without meeting the conditions in paragraph (a) of this section.

(Authority: 20 U.S.C. 1232g (a)(5) (A) and (B))

Sec.

99.38 What conditions apply to disclosure of information as permitted by State statute adopted after November 19, 1974, concerning the juvenile justice system?

(a) If reporting or disclosure allowed by State statute concerns the juvenile justice system and the system's ability to effectively serve, prior to adjudication, the student whose records are released, an educational agency or institution may disclose education records under § 99.31(a)(5)(i) (B).

(b) The officials and authorities to whom the records are disclosed shall certify in writing to the educational agency or institution that the information will not be disclosed to any other party, except as provided under State law, without the prior written consent of the parent of the student.

(Authority: 20 U.S.C. 1232g((b)(I)(J))

Sec.

99.39 *What definitions apply to the nonconsensual disclosure of records by postsecondary educational institutions in connection with disciplinary proceedings concerning crimes of violence or nonforcible sex offenses?*

As used in this part:

"Alleged perpetrator of a crime of violence" is a student who is alleged to have committed acts that would, if proven, constitute any of the following offenses or attempts to commit the following offenses that are defined in appendix A to this part:

Arson
Assault offenses
Burglary
Criminal homicide-manslaughter by negligence
Criminal homicide-murder and nonnegligent manslaughter
Destruction/damage/vandalism of property
Kidnapping/abduction
Robbery
Forcible sex offenses

"Alleged perpetrator of a nonforcible sex offense" means a student who is alleged to have committed acts that, if proven, would constitute statutory rape or incest. These offenses are defined in appendix A to this part.

"Final results" means a decision or determination, made by an honor court or council, committee, commission, or other entity authorized to resolve disciplinary matters within the institution. The disclosure of final results must include only the name of the student, the violation committed, and any sanction imposed by the institution against the student.

"Sanction imposed" means a description of the disciplinary action taken by the institution, the date of its imposition, and its duration.

"Violation committed" means the institutional rules or code sections that were violated and any essential findings supporting the institution's conclusion that the violation was committed.

(Authority: 20 U.S.C. 1232g (b)(6))

Subpart E – What Are the Enforcement Procedures?

Sec

99.60 *What functions has the Secretary delegated to the Office and to the Office of Administrative Law Judges?*

(a) For the purposes of this subpart, "Office" means the Family Policy Compliance Office, U.S. Department of Education.

(b) The Secretary designates the Office to:

(1) Investigate, process, and review complaints and violations under the Act and this part; and

(2) Provide technical assistance to ensure compliance with the Act and this part.

(c) The Secretary designates the Office of Administrative Law Judges to act as the Review Board required under the Act to enforce the Act with respect to all applicable programs. The term "applicable program" is defined in section 400 of the General Education Provisions Act.

(Authority: 20 U.S.C. 1232g (f) and (g), 1234))

Sec.

99.61 *What responsibility does an educational agency or institution have concerning conflict with State or local laws?*

If an educational agency or institution determines that it cannot comply with the Act or this part due to a conflict with State or local law, it shall notify the Office within 45 days, giving the text and citation of the conflicting law.

(Authority: 20 U.S.C. 1232g (f))

Sec.

99.62 *What information must an educational agency or institution submit to the Office?*

The Office may require an educational agency or institution to submit reports containing information necessary to resolve complaints under the Act and the regulations in this part.

(Authority: 20 U.S.C. 1232g (f) and (g))

Sec.
99.63 *Where are complaints filed?*

A parent or eligible student may file a written complaint with the Office regarding an alleged violation under the Act and this part. The Office's address is: Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue, S.W., Washington, DC 20202-5920.

(Authority: 20 U.S.C. 1232g(g))

Sec.
99.64 *What is the complaint procedure?*

(a) A complaint filed under § 99.63 must contain specific allegations of fact giving reasonable cause to believe that a violation of the Act or this part has occurred.

(b) The Office investigates each timely complaint to determine whether the educational agency or institution has failed to comply with the provisions of the Act or this part.

(c) A timely complaint is defined as an allegation of a violation of the Act that is submitted to the Office within 180 days of the date of the alleged violation or of the date that the complainant knew or reasonably should have known of the alleged violation.

(d) The Office may extend the time limit in this section for good cause shown.

(Authority: 20 U.S.C. 1232g(f))

Sec.
99.65 *What is the content of the notice of complaint issued by the Office?*

(a) The Office notifies the complainant and the educational agency or institution in writing if it initiates an investigation of a complaint under §99.64(b). The notice to the educational agency or institution-

(1) Includes the substance of the alleged violation; and

(2) Asks the agency or institution to submit a written response to the complaint.

(b) The Office notifies the complainant if it does not initiate an investigation of a complaint because the complaint fails to meet the requirements of § 99.64.

(Authority: 20 U.S.C. 1232g(g))

Sec.

99.66 What are the responsibilities of the Office in the enforcement process?

- (a) The Office reviews the complaint and response and may permit the parties to submit further written or oral arguments or information.
- (b) Following its investigation, the Office provides to the complainant and the educational agency or institution written notice of its findings and the basis for its findings.
- (c) If the Office finds that the educational agency or institution has not complied with the Act or this part, the notice under paragraph (b) of this section:
 - (1) Includes a statement of the specific steps that the agency or institution must take to comply; and
 - (2) Provides a reasonable period of time, given all of the circumstances of the case, during which the educational agency or institution may comply voluntarily.

(Authority: 20 U.S.C. 1232g(f))

Sec.

99.67 How does the Secretary enforce decisions?

- (a) If the educational agency or institution does not comply during the period of time set under § 99.66 (c), the Secretary may, in accordance with part E of the General Education Provisions Act-
 - (1) Withhold further payments under any applicable program;
 - (2) Issue a complaint to compel compliance through a cease-and-desist order; or
 - (3) Terminate eligibility to receive funding under any applicable program.
- (b) If, after an investigation under § 99.66, the Secretary finds that an educational agency or institution has complied voluntarily with the Act or this part, the Secretary provides the complainant and the agency or institution written notice of the decision and the basis for the decision.

(NOTE: 34 CFR part 78 contains the regulations of the Education Appeal Board.)

(Authority: 20 U.S.C. 1232g(f); 20 U.S.C. 1234)

Appendix A to Part 99 – Crimes of Violence Definitions

Arson

Any willful or malicious burning or attempt to burn, with or without intent to defraud, a dwelling house, public building, motor vehicle or aircraft, personal property of another, etc.

Assault Offenses

An unlawful attack by one person upon another. (NOTE: By definition there can be no "attempted" assaults, only "completed" assaults.)

(ii) Aggravated Assault

An unlawful attack by one person upon another for the purpose of inflicting severe or aggravated bodily injury. This type of assault usually is accompanied by the use of a weapon or by means likely to produce death or great bodily harm. (It is not necessary that injury result from an aggravated assault when a gun, knife, or other weapon is used which could and probably would result in serious injury if the crime were successfully completed.)

(b) Simple Assault

An unlawful physical attack by one person upon another where neither the offender displays a weapon, nor the victim suffers obvious severe or aggravated bodily injury involving apparent broken bones, loss of teeth, possible internal injury, severe laceration, or loss of consciousness.

(c) Intimidation

To unlawfully place another person in reasonable fear of bodily harm through the use of threatening words or other conduct, or both, but without displaying a weapon or subjecting the victim to actual physical attack. (NOTE: This offense includes stalking.)

Burglary

The unlawful entry into a building or other structure with the intent to commit a felony or a theft.

Criminal Homicide-Manslaughter by Negligence

The killing of another person through gross negligence.

Criminal Homicide-Murder and Nonnegligent Manslaughter

The willful (nonnegligent) killing of one human being by another.

Destruction/Damage/Vandalism of Property

To willfully or maliciously destroy, damage, deface, or otherwise injure real or personal property without the consent of the owner or the person having custody or control of it.

Kidnapping/Abduction

The unlawful seizure, transportation, or detention of a person, or any combination of these actions, against his or her will, or of a minor without the consent of his or her custodial parent(s) or legal guardian. (NOTE: Kidnapping/Abduction includes hostage taking.)

Robbery

The taking of, or attempting to take, anything of value under confrontational circumstances from the control, custody, or care of a person or persons by force or threat of force or violence or by putting the victim in fear. (NOTE: Carjackings are robbery offenses where a motor vehicle is taken through force or threat of force.)

Sex Offences, Forcible

Any sexual act directed against another person, forcibly or against that person's will, or both; or not forcibly or against the person's will where the victim is incapable of giving consent.

(a) Forcible Rape (Except "Statutory Rape")

The carnal knowledge of a person, forcibly or against that person's will, or both; or not forcibly or against the person's will where the victim is incapable of giving consent because of his or her temporary or permanent mental or physical incapacity (or because of his or her youth).

(b) Forcible Sodomy

Oral or anal sexual intercourse with another person, forcibly or against that person's will, or both; or not forcibly or against the person's will where the victim is incapable of giving consent because of his or her youth or because of his or her temporary or permanent mental or physical incapacity.

(b) Sexual Assault With An Object

To use an object or instrument to unlawfully penetrate, however slightly, the genital or anal opening of the body of another person, forcibly or against that person's will, or both; or not forcibly or against the person's will where the victim is incapable of giving consent because of his or her youth or because of his or her temporary or permanent mental or physical incapacity. (NOTE: An "object" or "instrument" is anything used by the offender other than the offender's genitalia. Examples are a finger, bottle, handgun, stick, etc..)

(d) Forcible Fondling

The touching of the private body parts of another person for the purpose of sexual gratification, forcibly or against that person's will, or both; or not forcibly or against the person's will where the victim is incapable of giving consent because of his or her youth or because of his or her temporary or permanent mental or physical incapacity. (NOTE: Forcible Fondling includes "Indecent Liberties" and "Child Molesting.")

Nonforcible Sex Offenses

(Except "Prostitution Offenses") Unlawful, nonforcible sexual intercourse.

(a) Incest

Nonforcible sexual intercourse between persons who are related to each other within the degrees wherein marriage is prohibited by law.

(b) Statutory Rape

Nonforcible sexual intercourse with a person who is under the statutory age of consent.

(Authority: 20 U.S.C. 1232g(b)(6) and 18 U.S.C. 16)

[This is not an official version of the regulations. These regulations are codified in 34 CFR Part 99.]

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