



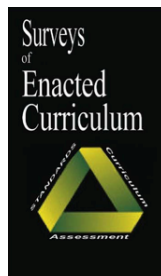
# Surveys of Enacted Curriculum Leader Development Standards

Knowledge and Skills Expectations for Leaders of  
Professional Development with Surveys of Enacted Curriculum (SEC)

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**Council of Chief State School Officers, Washington, DC**

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### **State Collaborative on Assessment and Student Standards**

The State Collaborative on Assessment and Student Standards (SCASS) Project was created in 1991 to encourage and assist states in working collaboratively on assessment design and development for a variety of topics and subject areas. The Division of State Services and Technical Assistance of the Council of Chief State School Officers is the organizer, facilitator, and administrator of the projects. SCASS projects accomplish a wide variety of tasks identified by each of the groups including examining the needs and issues surrounding the area(s) of focus, determining the products and goals of the project, developing assessment materials and professional development materials on assessment, summarizing current research, analyzing best practice, examining technical issues, and/or providing guidance on federal legislation.

**2006**

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# Table of Contents

Introduction .....	1
Purpose 1: Communicate the Purposes of SEC and the Data Tools .....	4
Purpose 2: Provide Training for Educators in How to Access and Analyze SEC Data .....	6
Purpose 3: Lead Planning for SEC Applications at State, District, or School Level .....	8
Purpose 4: Conduct SEC Orientations to Prepare Teachers to Take the Survey .....	10
Purpose 5: Analyze Alignment of Instruction and Standards.....	12
Purpose 6: Integrate SEC Data and Student Achievement Data .....	14
Purpose 7: Use SEC Data to Improve Instruction .....	16
Purpose 8: Measure and Evaluate Instructional Change .....	18
Appendices	
A. List of References.....	20
B. Topic List .....	22

# **SURVEY OF ENACTED CURRICULUM LEADER DEVELOPMENT STANDARDS**

## **Introduction**

### **SEC Collaborative Project**

The original goal of the Surveys of Enacted Curriculum (SEC) state collaborative project in 1998 was to assist state education leaders in developing a survey in mathematics and science that would assist them in aligning instruction to content standards and assessments. After both surveys were completed, the role of the collaboratives not only continued to focus on mathematics and science alignment analysis, but also began to expand by developing surveys in other content areas, namely, the recently completed English Language Arts/Reading Survey (2003) and the Social Science Survey (in development as of March 2006). Additionally, the application and use of the Surveys expanded beyond alignment analyses to monitoring instructional and teachers change, conducting professional development, and evaluating program implementation and impact.

The SEC Collaborative currently consists of 18 states and two school districts whose members routinely network to create, and share experiences, strategies, models and resources found to be helpful in the successful utilization of the survey whether by research analysts, state agency specialists or school practitioners.

In addition to SEC Collaborative members, a collaborative partnership with multiple organizations has contributed resources to ensure the successful implementation of the SEC. The Council of Chief State School Officers (CCSSO) provides the lead organizational support for the Collaborative, the Wisconsin Center for Education Reform (WCER) provides technical development of the Survey, and Learning Point Associates (LPA) and TERC, Inc. provide professional development and technical assistance to SEC users. Each organization maintains a web site that links users to the SEC, research, reports, and professional development materials that will enable them to learn about and use SEC.

### **Rationale for the SEC Leader Development Standards**

Given the growth in both SEC content and applications, the SEC Professional Development group, in collaboration with SEC Collaborative members, determined a need to identify and clarify the knowledge and skills necessary to carry out the role and responsibilities of an effective SEC Leader. These SEC Leader Development Standards are the result of that effort.

The SEC Leader Development Standards broadly outlines the essential knowledge and skills needed by those responsible for leading professional development with educators on planning, implementation, and use of the Surveys of Enacted Curriculum for a variety of purposes.

As the SEC comes into routine use by increasing numbers of educational groups for a wide range of applications, the need has grown to articulate the knowledge and skills needed by SEC Leaders. In the same way, the need has also grown to identify and/or build materials and resources that will assist those responsible for the successful implementation and use of the SEC.

These Leader Development Standards, along with suggested materials and resources, have been developed by a core group of SEC professional development providers with extensive experience in using the Survey with state agency staff, school district and school personnel, and Reading First and MSP practitioners. The goal of these Standards is to build the capacity of individuals to address critical needs for introducing and using SEC effectively.

The SEC core group identified a list of key purposes that are reflected in the current role and responsibilities of effective SEC Leaders. For each purpose, the group generated questions that served

as the basis for identifying and analyzing the core knowledge and skills that would become part of the SEC Leader Development Standards.

**Purpose 1: Communicate the purposes of SEC and the data tools**

- What is the essential knowledge needed to understand and communicate the underlying concept of “alignment” that is unique to SEC?
- What research supports the validity, reliability and usefulness of SEC?

**Purpose 2: Provide training for educators in how to access and analyze SEC data**

- What data does SEC provide?
- How is the data reported?
- How is SEC data analyzed and interpreted?

**Purpose 3: Lead planning for SEC applications at state, district, or school level.**

- What are the key ideas and issues that should be considered when planning an SEC project?
- What are key aspects of the planning process that should be considered when planning an SEC project?
- Why should stakeholders decide to use SEC?

**Purpose 4: Conduct SEC Orientations to prepare teachers to take the survey.**

- What content should be part of the SEC Orientation?
- What knowledge and skills do teachers need to take and complete the survey?

**Purpose 5: Analyze alignment of instruction and standards.**

- How can SEC lead to increased understanding of classroom instructional content in relation to standards and assessments?
- What information can assist educators and stakeholders in analyzing the alignment of classroom instructional content in relation to standards? In relation to assessments?

**Purpose 6: Integrate SEC data and student achievement data.**

- How can SEC data be utilized and integrated with student achievement data in the school improvement process?
- What information can assist educators and stakeholders in identifying the connections and linkages between SEC and student achievement data?

**Purpose 7: Use SEC data to improve instruction.**

- What instructional improvement models have been utilized with SEC?
- What strategies have been implemented for engaging teachers in effective dialogue about the alignment of “taught curriculum” to the standards using SEC and student achievement data?
- What are the connections between SEC data and research, evidence-based practice and/or best practice?

**Purpose 8: Measure and evaluate instructional change.**

- What strategies and/or models have been utilized to conduct formative and summative evaluations of education processes and outcomes?
- What are the advantages and disadvantages of each model?

## Organization

The SEC Leader Development Standards that follow were based on the eight identified purposes that a SEC Leader should be able to effectively address with his/her clients. The Standards outline the knowledge, skills and abilities of an effective SEC leader for the given purpose of SEC. Each SEC Leadership Standard includes the following information:

- The knowledge needed by SEC Leaders in order to develop technical assistance or professional development plans for educators and administrative leaders that successfully address a wide range of potential applications
- The skills and abilities needed by SEC Leaders in order to provide and deliver technical assistance and/or professional development to a broad range of teachers and educational leaders
- The critical and key concepts to be understood by SEC Leaders
- The participant outcomes of SEC workshop sessions that will serve as indicators of success for the evaluation of SEC professional development activities
- The key resources that support the development of the targeted knowledge and skills

As state, district, and school leaders who are making decisions about utilization of SEC and/or organizing SEC professional development opportunities, it is important to consider the following: leadership of SEC initiatives requires an individual with background and experience with the SEC and related areas of professional development.

Questions that should be addressed include:

- Is there an individual with the knowledge and skills available within state or locally?
- Given the SEC initiative planned, is there a need to develop the capacity of personnel to function as SEC Leaders?
- What are the advantages and disadvantages of contracting with an SEC collaborative partner or consultant to provide leadership for professional development?

SEC Leader Standards are broadly arranged in a sequential order, progressing from novice to expert levels of use and knowledge requirements.

## SEC Materials and Documents and Intellectual Property

When using SEC materials and documents, including PowerPoint and SEC Toolkit items, it is understood that state, district, and school personnel may wish to insert relevant, local context information and details where needed for the purposes of the local project (e.g., name of the SEC project, state and/or district logo, names of project personnel, etc.). While these are acceptable changes that can be made to the materials and documents, it is critical to note that the attribution of the source materials should remain visible and part of each version of document and/or presentation material. This is true for documents and materials made available through state and local websites, as well as those intended for use as handouts and for dissemination purposes (e.g., brochures, memoranda, etc.).

Given the ongoing development of a curriculum and leader presentation materials for professional development workshops, version numbers and/or dates should be contained as a header or footer in the source documentation so that members using the materials can track their own use and be able to update them as new versions and new content become available.

## Purpose 1: Communicate the Purposes of SEC and the Data Tools

- What is the essential knowledge needed to understand and communicate the underlying concept of “alignment” that is unique to SEC?
- What research supports the validity, reliability and usefulness of SEC?

The indicators of success that demonstrate that an SEC Leader has effectively met Purpose 1 is when the SEC users engaged can demonstrate an understanding of the research and rationale behind the SEC, the information it delivers, the reliability of the instrument, the different ways the survey can be used, and what its value can be for the users.

A routine element of discussing the potential use of the SEC is the ability to alleviate concern on the part of potential users, including teachers who will respond to the survey, that SEC results are valid (self-reported) data. Participants in introductory or orientation workshops should come away with knowledge about relevant validity studies.

STANDARD 1		SEC Leaders know, understand and are able to effectively communicate the SEC purposes and validity and its tools and applications.
SEC LEADER KNOWLEDGE AND SKILLS		PARTICIPANT OUTCOMES
<p><i>The SEC Leader knows:</i></p> <ul style="list-style-type: none"> <li>• How SEC data is collected, analyzed and reported</li> <li>• Design of the SEC data system, including its history, purpose, and use</li> <li>• A variety of SEC uses and applications</li> <li>• Research, reports and studies supporting the validity, reliability and usefulness of SEC</li> </ul> <p><i>The SEC Leader is able to:</i></p> <ul style="list-style-type: none"> <li>• Explain the instrument</li> <li>• Explain data reported in scales</li> <li>• Engage audience and respond to questions</li> <li>• Understand what “alignment” represents and importance for application of SEC data</li> <li>• Provide concrete examples of how SEC alignment model compares and contrasts with other methods of viewing alignment, e.g. the Webb model or Bloom’s Taxonomy</li> <li>• How SEC data connect to school improvement processes, NCLB, focusing efforts through data</li> <li>• Explain how alignment is based on the intersection of content (strand or topic) and level of emphasis (time) and expectation of student learning (cognitive demand level)</li> </ul>		<p><i>Participants engaging with the SEC Leader relative to this purpose will:</i></p> <ul style="list-style-type: none"> <li>• Understand the design, purposes, keys steps to be taken in order to engage with SEC tools and the SEC system</li> <li>• Become familiar with the rationale and development of the Surveys and its reporting tools and formats</li> <li>• Learn the progression of research behind the SEC and type of validity studies which have been completed</li> <li>• Understand the multiple and varied purposes for which SEC may be used--- instructional improvement, alignment of instruction to standards, program evaluation, and indicators over time</li> </ul>
KNOWLEDGE AND CONCEPTS ADDRESSED		
<ul style="list-style-type: none"> <li>• SEC data formats: contour, tile and floating bar</li> <li>• SEC levels of cognitive demand / expectations for student learning</li> <li>• Norm Webb’s Depth of Knowledge Model</li> <li>• Bloom’s Taxonomy</li> <li>• Alignment of instruction, standards, and assessment</li> <li>• Uses of SEC Data (e.g., program evaluation, alignment analysis, etc.)</li> </ul>		

## RESOURCES AND MATERIALS\*

Note: The following are available from: [www.secsurvey.org/SEC](http://www.secsurvey.org/SEC) Resources

[SEC Brochure](#), CCSSO

Education Leaders Orientation (PowerPoint Slides ), CCSSO

[SEC Guide for State and Local Coordinators](#), CCSSO

"Measuring Content of Instruction: Uses in Research and Practice," Porter, 2002

[Understanding Cognitive Demand](#) (PowerPoint Slides), Karatzas

[SEC Alignment Analysis](#) (PowerPoint Slides), Smithson

SEC101: Introduction to the SEC (PowerPoint Slides), CCSSO

"Defining, Developing, and Using Curriculum Indicators," Porter & Smithson, 2001

### Chart recommendations:

Instructional Content: Coarse and Fine Grain

Instructional Content: Tile and Contour Maps

Instructional Influences

Use of assessments

\* Citations only. See Appendix, section A for full reference.

**Purpose 2: Provide Training for Educators on How to Access and Analyze SEC Data**

- What data does SEC provide?
- How is the data reported?
- How is SEC data analyzed and interpreted?

The indicators of success that demonstrate that an SEC Leader has effectively met Purpose 2 is when users of the survey have an understanding of the data displayed in content alignment charts (coarse and fine grain), how to analyze and interpret the data, and generate their own reports in response to their needs and questions.

<b>STANDARD 2</b>		<b>SEC Leaders know, understand and are able to effectively communicate SEC data and reports.</b>	
<b>SEC LEADER KNOWLEDGE AND SKILLS</b>		<b>PARTICIPANT OUTCOMES</b>	
<p><i>The SEC Leader knows:</i></p> <ul style="list-style-type: none"> <li>• Types of data reported by SEC and the appropriate data chart for a given purpose (e.g., content taught, teaching practices, teacher opinion and beliefs, professional development, etc.)</li> <li>• SEC data disaggregations (e.g., grade level, achievement level, amount of professional development, etc.)</li> </ul> <p><i>The SEC Leader is able to:</i></p> <ul style="list-style-type: none"> <li>• Use the report generator to provide each type of report as needed and requested</li> <li>• Identify the charts and disaggregations that will provide the data needed to respond to questions and issues relative to local needs</li> <li>• Communicate results from reports so that it responds to local priorities and needs</li> </ul>		<p><i>Participants engaging with the SEC Leader relative to this purpose will:</i></p> <ul style="list-style-type: none"> <li>• Understand how the SEC data can be used for a range of purposes</li> <li>• Learn how to relate data collected and reported to local priorities</li> <li>• Know the various SEC reports available and how to read the results</li> <li>• Articulate questions exploring the connections between SEC data and local priorities and needs</li> </ul>	
<b>KEY CONCEPTS ADDRESSED</b>			
<ul style="list-style-type: none"> <li>• Interpretation</li> <li>• Report Generator</li> <li>• Charts/Display Types (e.g., floating bars, tile, contour, simple bar)</li> <li>• Suppression Rules</li> <li>• Scales</li> <li>• Variables</li> <li>• Data Disaggregation</li> <li>• Printing Reports</li> <li>• Data Formats</li> </ul>			

## RESOURCES AND MATERIALS

Note: The following are available from: [www.secsurvey.org/SEC](http://www.secsurvey.org/SEC) Resources  
[Guidelines and Procedures for Using SEC](#), WCER, [www.seconline.org](http://www.seconline.org)  
Education Leaders Orientation, (PowerPoint Slides), CCSSO  
["Alignment of Assessments, Standards, & Instruction: Using Curriculum Indicator Data,"](#) Porter & Smithson, 2002  
SEC301:Working with SEC Data, CCSSO  
Quick Reference guide for reading Charts, CCSSO, SEC-CD  
Quick Reference Guide for Administrators, CCSSO, SEC-CD  
Report Generator Activity, CCSSO, SEC-CD

### Purpose 3: Lead Planning for SEC Applications at State, District, or School Level

- What are the items to be considered when planning an SEC project?
- What are key aspects of the planning process that should be considered when planning an SEC project?
- Why should stakeholders decide to use SEC?

The SEC Leader will ensure that participants learn a range of ways in which the SEC can be used, including, but not restricted to, program evaluation, professional development planning, school improvement, aligning classroom instruction to standards and assessments, and investigating equity of content and practice.

Participants will understand why SEC tools can address their needs, learn what is needed to implement an SEC project, possible challenges to anticipate, the importance of identifying or developing a fertile context for using the SEC, the importance of knowing how to connect the SEC to state and local student achievement data (for a school improvement implementation), how the coding of standards and assessments is done and the planning needed to accomplish the coding needed in the local context.

In the case of new state agency audiences, participants will become knowledgeable about the SEC Collaborative, the benefits of membership, the resources and support available through the Collaborative, and the costs and process to join.

STANDARD 3		SEC Leaders have the knowledge and skills to assist SEC users to develop SEC projects at the state, district, and/or school level	
SEC LEADER KNOWLEDGE AND SKILLS		PARTICIPANT OUTCOMES	
<p><i>The SEC Leader knows:</i></p> <ul style="list-style-type: none"> <li>• Each component of the SEC and how survey results can be used for different purposes</li> <li>• Data that different audiences may typically explore in SEC data and reports</li> <li>• Alignment analysis process</li> <li>• Uses of alignment findings</li> <li>• Uses of SEC and key issues to address and avoid</li> <li>• Basic knowledge of NCLB requirements and potential connections to SEC data and reports</li> <li>• Costs and payment procedures</li> </ul> <p><i>The SEC Leader is able to:</i></p> <ul style="list-style-type: none"> <li>• Present information in an engaging way that connects to local needs</li> <li>• Explain and guide the planning process</li> <li>• Provide examples of different project plans based on needs</li> <li>• Provide different models of SEC data use</li> <li>• Provide guidance and assistance in alignment analysis</li> </ul>		<p><i>Participants engaging with the SEC Leader relative to this purpose will:</i></p> <ul style="list-style-type: none"> <li>• Learn how the SEC data can be used for a range of purposes</li> <li>• Understand how to relate data collected and reported to local priorities</li> <li>• Be able to use SEC reports and research available to assist in planning</li> <li>• Articulate questions exploring the connections between SEC data and local priorities and needs</li> </ul>	

### KEY KNOWLEDGE AND CONCEPTS ADDRESSED

- Timelines (e.g., administration of survey, content analysis process, orientation and engagement, etc.)
- Target group
- State Standards and/or Assessments coded
- State and/or Local project examples
- State and/or Local materials (e.g., sample letters, brochures, etc.)

### RESOURCES AND MATERIALS

Note: The following are available from: [www.secsurvey.org/SEC](http://www.secsurvey.org/SEC) Resources

[SEC Guide for State and Local Coordinators](#), CCSSO

SEC Collaborative Webpage Project Profiles, CCSSO

SEC Costs of Tools and Services, CCSSO

[Using Data on Enacted Curriculum: A Guide for Professional Development](#), CCSSO, 2002

Data on Enacted Curriculum: Summary Findings from Longitudinal Study, Blank, et al., 2004

Uses of Surveys of Enacted Curriculum in States: Questions for State Planning

## Purpose 4: Conduct SEC Orientations to Prepare Teachers to Take the Survey

- What content should be part of the SEC Orientation?
- What knowledge and skills do teachers need to take and complete the survey?

When the SEC Leader addresses this purpose, administrators and teachers understand the purpose of the survey, administration requirements including technical and time requirements for completing the survey, how to set-up survey collection, how to access completion records, how to log-in to register and complete survey sections. In addition, teachers will have some familiarity with the organization and language used in the survey.

STANDARD 4		SEC Leaders have the knowledge and skills to conduct SEC Orientations for a variety of educational leaders and stakeholders.
SEC LEADER KNOWLEDGE AND SKILLS	PARTICIPANT OUTCOMES	
<p><i>The SEC Leader knows:</i></p> <ul style="list-style-type: none"> <li>• Survey content (e.g., different sections of the survey, completing only certain sections, etc.)</li> <li>• Time required to take survey</li> <li>• Possible problems and/or questions to anticipate</li> <li>• Perspective of classroom teachers who will take the survey</li> <li>• Materials that are needed by teachers for survey administration (e.g., calendars, lesson plans, curriculum materials, etc.)</li> <li>• Registration procedures and contacts</li> <li>• Problem-solving and troubleshooting contacts</li> </ul> <p><i>The SEC Leader is able to:</i></p> <ul style="list-style-type: none"> <li>• Translate SEC language in terms of local descriptors</li> <li>• Present information about the taking the survey as a clear and linear process</li> <li>• Identify possible solutions for problems that may be identified</li> <li>• Anticipate and address issues and concerns of local coordinators and survey respondents</li> </ul>	<p><i>Participants engaging with the SEC Leader relative to this purpose will:</i></p> <ul style="list-style-type: none"> <li>• Surface questions and/or concerns to be addressed</li> <li>• Identify appropriate and necessary information to bring to the survey administration</li> <li>• Learn what is available online and how to access</li> <li>• Understand how to register and complete the survey</li> <li>• Develop a comfort level with taking the survey that will yield the most valid results</li> </ul>	
KEY CONCEPTS ADDRESSED		
<ul style="list-style-type: none"> <li>• Target class</li> <li>• Instructional content</li> <li>• Topics</li> <li>• Time on Topic</li> <li>• Cognitive Demand</li> <li>• Degree of Emphasis</li> <li>• Log on</li> <li>• Online Survey (e.g., sections to be completed checklists, look and feel, etc.)</li> <li>• Registration process</li> <li>• Administrator log on and access</li> </ul>		

## RESOURCES AND MATERIALS

Note: The following are available from: [www.secsurvey.org/SEC](http://www.secsurvey.org/SEC) Resources  
Introduction to SEC, CCSSO  
SEC Online Survey Administration, CCSSO, [www.SEOnline.org](http://www.SEOnline.org)  
[A Step by Step Guide for Teachers Taking the Survey](#), [www.SEOnline.org](http://www.SEOnline.org)  
SEC101: Introduction to SEC, CCSSO  
SEC201: Administering the survey, CCSSO

## Purpose 5: Analyze Alignment of Instruction and Standards

- How can SEC lead to increased understanding of classroom instructional content in relation to standards and assessments?
- What information can assist educators and stakeholders in analyzing the alignment of classroom instructional content in relation to standards? In relation to assessments?

SEC Leaders will have met this purpose when their participants are able to understand critical relationships between and among instruction, standards, assessment and student achievement. SEC users are also able to identify and use instructional content data available from SEC as well as able to generate, analyze and explain SEC alignment data.

STANDARD 5		SEC Leaders have the knowledge and skills to utilize SEC for analyzing instruction and standards.
SEC LEADER KNOWLEDGE AND SKILLS		PARTICIPANT OUTCOMES
<p><i>The SEC Leader knows:</i></p> <ul style="list-style-type: none"> <li>• Standards-based education requirements and research supporting its use and implementation</li> <li>• Critical content and design of state and national standards</li> <li>• NCLB and AYP requirements and their relationship to state standards and assessment results</li> <li>• SEC data that is available for alignment analysis</li> <li>• SEC documents, reports, and research about alignment analyses</li> <li>• Survey reporting metrics including 2 dimensional construct for content and alignment statistics</li> <li>• Process for conducting content analysis</li> <li>• Content matrix (e.g., subject area topic taxonomies, content specific levels of cognitive demand and their relationship with each other)</li> <li>• What the data can yield and cannot yield in terms of alignment analysis</li> </ul> <p><i>The SEC Leader is able to:</i></p> <ul style="list-style-type: none"> <li>• Access, read, and interpret SEC charts and graphs</li> <li>• Translate questions into charts that will respond to those questions (e.g., are the content and instruction in math the same in basic math as in the regular math classes – instructional content disaggregated by level of student achievement)</li> <li>• Lead and model collaborative data driven dialogue using SEC data</li> <li>• Able to identify and use alignment research and evidence based practice to respond to questions about issues raised by SEC data</li> </ul>		<p><i>Participants engaging with the SEC Leader relative to this purpose will:</i></p> <ul style="list-style-type: none"> <li>• Understand the critical relationship between and among standards, assessment, instruction and student learning</li> <li>• Evaluate instructional content data and be able to make clear and accurate observations about what the data says and does not say</li> <li>• Read and analyze SEC content graphs (tile or contour) for instructional content, assessments and standards (if available and appropriate)</li> <li>• Anticipate questions that the SEC data raise</li> <li>• Identify trends, patterns and significant differences</li> <li>• Develop effective questioning skills about SEC data and across different data sets (e.g., student achievement results, observation data, etc.)</li> <li>• Understand the need to align instruction to standards and know what to align for an improved alignment</li> <li>• Understand the similarities and differences of SEC Cognitive Demand Categories and how to apply the data on cognitive demand/expectations to improve student learning.</li> </ul>

### KEY CONCEPTS ADDRESSED

- Alignment measures and formulas
- Diagnostics
- Instructional Alignment
- Alignment Targets
- Alignment re-centered

### RESOURCES AND MATERIALS

"Measuring Content of Instruction: Uses in Research and Practice," Porter, 2002  
*Knowing What Students Know*, National Research Council, 2001  
SEC Reports Tutorial, [www.SEOnline.org](http://www.SEOnline.org)  
Understanding Cognitive Demand, [www.SEOnline.org](http://www.SEOnline.org)  
Content Coding Procedures, CCSSO, [www.secsurvey.org](http://www.secsurvey.org)  
SEC Alignment Analysis (PowerPoint Slides) Smithson, 2005  
"Analyzing Instructional Content and Practices Using Data," Blank & Hill, 2004  
*Measuring Classroom Practice: Lessons Learned from Efforts to Describe the Enacted Curriculum -- The Reform Up Close Study.* Smithson & Porter, 1994.  
SEC Surveys ( paper surveys for all content areas), [www.seconline.org](http://www.seconline.org)

Chart Recommendations: Instructional Content compared to state standards; Coarse grain and Fine grain

## Purpose 6: Integrate SEC Data and Student Achievement Data

- How can SEC data be utilized and integrated with student achievement data in the school improvement process?
- What information can assist educators and stakeholders in identifying the connections and linkages between SEC and student achievement data?

When working with participants focused on the use of SEC at the **classroom level**, the SEC Leader will have addressed this purpose when his/her participants are able to use their classroom assessments, unit and lesson plans in conjunction with the SEC data by topic, emphasis and cognitive demand to review their alignment to standards and/or assessments.

Likewise, when working with participants to address **school and district level** needs related to this purpose, the SEC Leader will be successful when participants understand how to use school and/or school SEC data with student performance data to identify areas for school improvement as well as review school and district alignment to standards and/or assessments.

STANDARD 6	SEC Leaders have the knowledge and skills to assist SEC users in making connections and integrating SEC data with student achievement data.	
SEC LEADER KNOWLEDGE AND SKILLS	PARTICIPANT OUTCOMES	
<p><i>The SEC Leader knows:</i></p> <ul style="list-style-type: none"> <li>• Utilization of SEC data for:                             <ul style="list-style-type: none"> <li>- Program evaluation and monitoring change</li> <li>- Conduct of content alignment analysis</li> <li>- Improvement of Instruction</li> </ul> </li> <li>• Connections that can be made between SEC data at student achievement data at the classroom, school and/or district level</li> <li>• Research, evidence-based best practice related to SEC data and identified areas for classroom instruction, school and/or district improvement</li> <li>• Necessary elements of a continuous school improvement process</li> <li>• SEC content analysis process</li> <li>• Questions and SEC data that can be utilized to provide opportunities for teachers and administrators to explore possible causes for low student achievement</li> <li>• Participants priorities and needs at all levels</li> </ul> <p><i>The SEC Leader is able to:</i></p> <ul style="list-style-type: none"> <li>• Explain and demonstrate the use of SEC for:                             <ul style="list-style-type: none"> <li>- Program evaluation and monitoring change</li> <li>- Conduct of content alignment analysis</li> <li>- Improvement of Instruction</li> </ul> </li> <li>• Explain and engage participants in the analysis of SEC content data and instructional practice data</li> <li>• Make connections between SEC data findings and research and/or evidence-based “best” practice</li> </ul>	<p><i>Participants engaging with the SEC Leader relative to this purpose at the <b>classroom level</b> will:</i></p> <ul style="list-style-type: none"> <li>• Understand and use classroom assessments, unit and lesson plans in conjunction with the SEC data by topic, emphasis and cognitive demand to review their (individual teacher) alignment to standards and/or assessments</li> </ul> <p><i>Participants engaging with the SEC Leader relative to this purpose at the <b>school/district level</b> will:</i></p> <ul style="list-style-type: none"> <li>• Understand and use school and/or school SEC data with student performance data to identify areas for school improvement as well as review school and district alignment to standards and/or assessments</li> <li>• Understand and use SEC data to inform school and district wide improvement plan(s)</li> </ul>	

<p><b>STANDARD 6</b></p>	<p><b>SEC Leaders have the knowledge and skills to assist SEC users in making connections and integrating SEC data with student achievement data.</b></p>	
<p><b>SEC LEADER KNOWLEDGE AND SKILLS</b></p>	<p><b>PARTICIPANT OUTCOMES</b></p>	
<ul style="list-style-type: none"> <li>• Make connections between SEC data, student achievement and/or other state or local data in order to identify the potential causes of low student achievement</li> <li>• Assist school and district leaders in designing and implementing a cycle for using SEC to monitor implementation and instructional change</li> <li>• Address the specific priorities and needs of his/her participants using SEC data</li> </ul>		
<p><b>KNOWLEDGE AND CONCEPTS ADDRESSED</b></p>		
<ul style="list-style-type: none"> <li>• Context of classroom, school, district and state improvement efforts</li> <li>• Curriculum-mapping</li> <li>• Causal analysis</li> <li>• Alignment analysis</li> <li>• Correlation and attribution</li> <li>• Integration of SEC into school and district improvement efforts and initiatives</li> <li>• Research and evidence-based practice</li> <li>• Requirement under state and national regulations (NCLB and AYP)</li> <li>•</li> </ul>		
<p><b>RESOURCES AND MATERIALS</b></p>		
<p>"Using Data/Getting Results," Love, 2001  <a href="#">"Test Scores: What Can They Tell Us?"</a> Nunnaley, 2004                  State School Improvement Planning Documents and Processes (usually found in divisions of school accountability and/or school improvement on state websites)                  Local School Improvement Planning Documents And Processes</p>		

**Purpose 7: Use SEC Data to Improve Instruction**

- What instructional improvement models have been utilized with SEC?
- What strategies have been implemented for engaging teachers in effective dialogue about the alignment of “taught curriculum” to the standards using SEC and student achievement data?
- What are the connections between SEC data and research, evidence-based practice and/or best practice?

SEC Leaders who are successful in meeting this purpose will engage with participants who understand and are able to use SEC data to facilitate discussions about Instructional Content. Using content alignment charts, participants are able to demonstrate how SEC data can indicate an area of their instruction and/or practice that they want to further analyze, for example, alignment with standards, the pacing of instruction, instructional practices, teacher beliefs, professional development, teacher readiness to teach content or to teach content to varied groups of students.

After working with SEC Leaders, participants will be able to use SEC charts, including scales, practice, readiness, and teacher beliefs to explore ranges of practice among teachers across courses taught, grade level teams in their school, their school compared to other schools in the district or to the district as a whole. Having identified areas that may be problematic or weak, participants will be able to use research and/or “best practice” to gauge the effectiveness and guide the direction of their own practice and plans for improvement student learning.

<p><b>STANDARD 7</b></p> <p><b>SEC Leaders have the knowledge and skills to assist participants utilize SEC data to improving their instruction.</b></p>	
<p><b>SEC LEADER KNOWLEDGE AND SKILLS</b></p>	<p><b>PARTICIPANT OUTCOMES</b></p>
<p><i>The SEC Leader knows:</i></p> <ul style="list-style-type: none"> <li>• Facilitation and group planning processes</li> <li>• How to connect the analysis of SEC data with local school improvement processes</li> <li>• Relationship of alignment data to curriculum, materials, classroom assessments, level of emphasis, time, and pacing</li> <li>• Local district’s language for describing expectations for student learning, e.g., Bloom’s Taxonomy, Depth of Knowledge, etc.</li> <li>• Alignment research linked to improved student achievement</li> <li>• Levels of cognitive demand across all content areas</li> <li>• Research and best practice sources and examples from high performing schools (e.g., small learning communities, use of manipulatives in math classrooms, collaborative professional development models, etc.), as well as research relative to practices that may harm students and/or suppress high student achievement (e.g., tracking, low teacher expectations, excessive use of worksheets, etc.)</li> <li>• Analyze SEC data using disaggregations</li> <li>• Questions that assist practitioners to explore the connections between SEC reported activities and potential impact on student achievement</li> </ul>	<p><i>Participants engaging with the SEC Leader relative to this purpose will:</i></p> <ul style="list-style-type: none"> <li>• Develop workable and realistic plans for using SEC data to improve instruction on a continuous basis</li> <li>• Use SEC content alignment charts to identify areas of strong and weak alignment relative to standards and/or assessments.</li> <li>• Use similarities and differences between their “taught” curriculum -- levels of emphasis (expectations for student learning) and SEC expectations for student learning (cognitive demand) categories -- to examine their course content in comparison to state standards</li> <li>• Use SEC results to identify and define current practices, compare and contrast with desired or “best” practice</li> </ul>

STANDARD 7		SEC Leaders have the knowledge and skills to assist participants utilize SEC data to improving their instruction.
SEC LEADER KNOWLEDGE AND SKILLS	PARTICIPANT OUTCOMES	
<p><i>The SEC Leader is able to:</i></p> <ul style="list-style-type: none"> <li>• Effectively facilitate and engage a group in collaborative planning that relates local alignment data to student performance problems and goals</li> <li>• Conduct, and facilitate participants in conducting, alignment analysis between school and/or district SEC data and standards or assessments at both the coarse and fine grain level</li> <li>• Generate and use appropriate examples of the levels of cognitive demand from all content areas</li> <li>• Engage teachers in analyzing levels of cognitive demand relative to their curriculum units, lesson plans, teacher developed assessments, etc. and in highlighting discrepancies and consistencies</li> <li>• Generate questions that engage cognitive dissonance relative to research connections to SEC results</li> </ul>	<ul style="list-style-type: none"> <li>• Analyze a variety of possible relationships between instructional content and instructional activities relative to: student achievement levels, teacher beliefs and opinions, specific instructional strategies, teacher expectations, amount of professional development, etc.</li> </ul>	
KNOWLEDGE AND CONCEPTS ADDRESSED		
<ul style="list-style-type: none"> <li>• Standards for high quality professional development</li> <li>• Standards based education</li> <li>• State and national standards</li> <li>• State and national assessments</li> <li>• Definition of research, evidence-based research, and best practice</li> <li>• SEC disaggregations</li> <li>• Leading data dialogues</li> <li>• Facilitation skills</li> <li>• Alignment analysis</li> </ul>		
RESOURCES AND MATERIALS		
<p><a href="#">Describing, Analyzing and Reporting Curriculum Data: The SEC Toolbox</a> (PowerPoint Slides), WCER  <a href="#">"Test Scores: What Can They Tell Us?"</a> Nunnaley, 2004, <a href="http://www.secsurvey.org">www.secsurvey.org</a>  <a href="#">SEC Reports Tutorial</a>, <a href="http://www.SEOnline.org">www.SEOnline.org</a>  <a href="#">Guidelines and Procedures for Using the Surveys of Enacted Curriculum</a>, <a href="http://www.SEOnline.org">www.SEOnline.org</a>  <a href="#">Understanding Cognitive Demand</a>, <a href="http://www.SEOnline.org">www.SEOnline.org</a>  <a href="#">SEC Alignment Analysis</a> (PowerPoint Slides), Smithson  <a href="#">"Analyzing Instructional Content and Practices Using Data,"</a> Blank &amp; Hill, 2004  <a href="#">"Alignment of Assessments, Standards, &amp; Instruction Using Curriculum Indicator Data,"</a> Porter &amp; Smithson, 2002  <a href="#">Data on Enacted Curriculum Study - Summary of Findings</a>, Blank, et al., 2004  <a href="#">"Alignment as a Teacher Variable,"</a> Porter, 2006</p> <p><b>Also:</b>                      Local curriculum documents                      State standards and/or assessments                      Released items</p>		

## Purpose 8: Measure and Evaluate Instructional Change

- How are SEC data utilized to conduct formative and summative evaluations of education processes and outcomes?
- What are the advantages and disadvantages of SEC data for evaluating programs, professional development or school improvement initiatives?
- How can SEC data serve as indicators of change over time?

Participants will gain an understanding of SEC data applications for several evaluation purposes, including an indicator system for comparing instruction across schools, determining effects of a policy or program initiative, evaluating change in instruction over time, and how to analyze alignment of instruction to standards as a dependent variable.

STANDARD 8		SEC Leaders have the knowledge and skills	
SEC LEADER KNOWLEDGE AND SKILLS		PARTICIPANT OUTCOMES	
<p><i>The SEC Leader knows:</i></p> <ul style="list-style-type: none"> <li>• SEC data evaluation models and designs and relevance to different audiences and needs</li> <li>• Issues and objectives that can be met through the design process using SEC data and the use of SEC indicator systems</li> <li>• Use of SEC measures for summative and formative evaluation</li> <li>• Teacher characteristics as defined by SEC data</li> <li>• Formulation of evaluation questions</li> <li>• Issues relative to variables being measured over time</li> <li>• Summary measures, item profiles, content data reported in a matrix, disaggregated SEC data</li> <li>• Evaluation study design terminology: sample size, reliability, validity, appropriate unit of analysis, use of treatment and control groups, meaningful or significant differences, longitudinal analyses to measure change.</li> </ul> <p><i>The SEC Leader is able to:</i></p> <ul style="list-style-type: none"> <li>• Provide assistance in developing evaluation models and designs that utilize SEC data, including sample size needed, variables, unit of analysis, etc.</li> <li>• Identify examples of studies and / or similar initiatives that have been undertaken, including issues to be considered</li> <li>• Assist participants in generating and refining appropriate questions that will frame and focus the evaluation</li> <li>• Assist in generating reports</li> <li>• Assist in the data analysis</li> </ul>		<p><i>Participants engaging with the SEC Leader relative to this purpose will:</i></p> <ul style="list-style-type: none"> <li>• Identify objectives and potential issues that must be addressed by the evaluation design</li> <li>• Understand how SEC data are collected, reported, and can be applied to evaluation questions</li> <li>• Utilize scales, item profiles, content data and disaggregated SEC data to analyze SEC in response to evaluation questions</li> <li>• Identify appropriate samples size needed for reliable results, unit of analysis, treatment and control groups, timeline for the study.</li> <li>• Specify data output needed</li> <li>• Analyze data relative to evaluation questions</li> <li>• Communicate and share findings to appropriate stakeholders</li> </ul>	

## KNOWLEDGE AND CONCEPTS ADDRESSED

- Scales
- Indicators
- Evaluation design
- Longitudinal analysis
- Reliability
- Validity
- Treatment and control group
- Meaningful differences
- Standard deviation
- Variables
- Sample size
- Unit of analysis

## RESOURCES AND MATERIALS

Note: following available on [www.secsurvey.org](http://www.secsurvey.org).

"Using Survey of Enacted Curriculum in Evaluation of Instruction in Relation to Standards," Blank, 2002

"Measuring Content of Instruction: Uses in Research and Practice," Porter, 2002

"Indicators of Quality of Teacher Professional Development: MSP Longitudinal Study of Effects,"  
Smithson & Blank, 2006

SEC Alignment Analysis (PowerPoint Slides), Smithson

[Alignment of Assessments, Standards, & Instruction Using Curriculum Indicator Data,](#) Porter &  
Smithson, 2002

[Content Coding Procedures](#), WCER, [www.SEOnline.org](http://www.SEOnline.org)

"Upgrading High School Mathematics Instruction: Improving Learning Opportunities for Low-Achieving,  
Low-Income Youth," A. Gamoran, et al., 1997

## Appendix A

### List of References

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*Applied Measurement in Education*. Vol. 20, N.1, December 2006.
- "Alignment of Assessments, Standards, and Instruction Using Curriculum Indicator Data," Andrew Porter  
& John Smithson, NCME Annual Meeting, 2002.
- "Analyzing Instructional Content," John Smithson, *WCER Research Highlights*, Spring 2004.
- "Analyzing Instructional Content and Practices Using Data to Improve Alignment of Science Instruction  
with Standards," Rolf Blank & Stan Hill, *NSTA Science Teacher*, January 2004.
- "Defining, Developing, and Using Curriculum Indicators," Andrew Porter and John Smithson, *Consortium  
for Policy Research in Education*, December 2001.
- "From policy to practice: the evolution of one approach to describing and using curriculum data." John L.  
Smithson & Andrew C. Porter In M. Wilson (Ed.), *Towards Coherence Between Classroom  
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- "Indicators of Quality of Teacher Professional Development and Instructional Change using Surveys of  
Enacted Curriculum: MSP Longitudinal Study of Effects of Professional Development," John  
Smithson & Rolf Blank, CCSSO, 2006
- Knowing What Students Know*. Center for Education, National Academies Press, 2001.
- Measuring Classroom Practice: Lessons Learned from Efforts to Describe the Enacted Curriculum -- The  
Reform-Up-Close Study*. John L. Smithson & Andrew Porter, A.C. CPRE Research Report Series  
Report #31. New Brunswick, NJ: Rutgers University, Consortium for Policy Research in  
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- "Measuring the Content of Instruction: Uses in Research and Practice," Andrew Porter, AERA  
Presidential Address, *Educational Researcher*, October 2002.
- "Place-Based Randomized Trials to Test the Effects on Instructional Practices of a Mathematics/Science  
Professional Development Program for Teachers," Andrew Porter, Rolf Blank, John Smithson, &  
Eric Osthoff, *The Annals of the American Academy of Political and Social Science*, V. 599,  
Sage Publications, May 2005.
- "Schooling Practices That Matter Most," Kathleen Cotton, Northwest Regional Educational Laboratory,  
April 2000.
- "Test Scores: What Can They Tell Us?" Diana Nunnaley, *Hands-On*, TERC, V.27, N.1, Spring 2004.
- "Upgrading High School Mathematics Instruction: Improving Learning Opportunities for Low-Achieving,  
Low-Income Youth," A. Gamoran, A.C. Porter, J. Smithson, & P.A. White, *Educational Evaluation  
and Policy Analysis* 19(4), Winter 1997. [Validation research with SEC--effects of aligned  
instruction on achievement]

*Using Data/Getting Results*, Nancy Love, Gordon Press, 2001

"Using Surveys of Enacted Curriculum to Advance Evaluation of Instruction in Relation to Standards,"  
Rolf Blank, *Peabody Journal of Education*, Fall 2002.

### **Presentations/Workshop Materials** (See [www.SECsurvey.org](http://www.SECsurvey.org))

*Describing, Analyzing and Reporting Curriculum Data: The SEC Toolbox*, John Smithson, WCER, 2005.

**Education Leaders Orientation:** to introduce Surveys of Enacted Curriculum and discuss the uses of the data with district or school leaders

**Expert Training Facilitator's Guide:** PowerPoint presentation template to be used in introducing SEC to your stakeholders

"Findings on Alignment of Instruction, Standards, and Assessments Using the Surveys of Enacted Curriculum" AERA symposium, 2004, [Rolf Blank, CCSSO](#); [Andrew Porter, Vanderbilt University](#); [Eric Osthoff, University of Wisconsin-Madison](#); and [John Smithson, University of Wisconsin-Madison](#)

*Introduction to Accessing and Understanding SEC Data*, Diana Nunnaley, TERC, 2005

*Longitudinal Study to Measure Effects of MSP Professional Development: Study Design and Use of SEC Tools*, Rolf Blank, CCSSO, 2005.

Introduction to SEC and [Orientation for Teacher Surveys](#), SEC Collaborative, 2006

Understanding Cognitive Demand [PowerPoint](#) and [Workshop Outline](#)

*Using Curricular Measures for Description and Analysis*, John Smithson, WCER, 2005.

### **Publications Available from CCSSO**

*Costs of SEC Tools and Services*, 2006

*Data on Enacted Curriculum Study - Summary of Findings: Experimental Design Study of Effectiveness of DEC Professional Development Model in Urban Middle Schools*, 2004

*New Tools for Analyzing Teaching, Curriculum and Standards in Mathematics & Science: Results from Survey of Enacted Curriculum Project*, 2001

*Overview of SEC and Applications for Education*, 2005

*SEC CD: Surveys of Enacted Curriculum Indicators CD*, 2003

Survey Instruments: Survey of Classroom Practices and Instructional Content in Mathematics, Science, and English Language Arts [Elementary, Middle, High school versions], available in pdf format on [www.SECsurvey.org](http://www.SECsurvey.org) or [www.SEOnline.org](http://www.SEOnline.org)

*Surveys of Enacted Curriculum: A Guide for SEC State and Local Coordinators*, 2005

*Using Data on Enacted Curriculum--A Guide for Professional Development*, 2002

## Appendix B

### Topic List

#### Survey of Enacted Curriculum Topic List

*The following list of general categories contain terms and concepts that SEC Leaders should seek to know and understand at increasing levels of complexity and specificity. This listing is not meant to be all inclusive or required, but rather to serve as a guide for SEC Leaders development efforts.*

#### Alignment Analyses

- Alignment Measures / Formulas
- Diagnostics with Alignment
- Instructional Alignment
- Alignment Targets
- Use in Research / Program Evaluation

#### Charts/Displays/Output

- Types (Floating Bar, Simple Bar, Tile Chart, Contour Map)
- Interpretation
- Suppression Rules
- Data Disaggregation
- Printing/Importing

#### Change Process

- Engagement of Stakeholders
- Professional Developments Models and Designs
- Standards for High Quality Professional Development
- Significant and/or Meaningful Differences
- Stages of Change
- Change Theory

#### Content Analysis

- Procedures
- Coding Experience
- Processing
- Display Options (distributed, non-distributed)
- Data Formats

#### Context

- School Climate
- Standards Based Education
- Leadership Issues
- Policy Levels & Levers (e.g., state accountability systems, NCLB, Title I, etc.)
- History of SEC
- SEC Research & Development
- Program Context / Objectives

#### Data Literacy

- Leading Data Dialogues for a Variety of Purposes
- Student Achievement Data (e.g., criterion referenced, norm referenced, end of unit assessments, etc.)
- Significant and/or Meaningful Difference
- Standard Deviation
- Mean
- Median
- Alignment Analysis (see above)

**Data Literacy (continued)**

Causal Analysis  
Correlation and Attribution

**Resources and Materials**

Background Papers / Related Articles  
Presentations / PowerPoints  
Guides  
Forms  
Partner Organizations & Roles  
Consulting & Other Services  
SEC Contacts  
SEC-related Web sites  
Other resources / Links

**SEC Planning Processes**

Participation and Engagement of Stakeholders  
Integration of SEC into Improvement Efforts and Initiatives  
Identifying Connections with Student Achievement Data and Identified Student Learning Problems  
Identifying Connections of SEC with Research and Evidence-Based Practice  
Marketing Purpose of SEC  
Identifying the Purpose of Project  
Scope and Magnitude of Project  
Target Group  
Resources needed and available (e.g., costs, human resources, time, etc.)  
Leadership Roles  
Communication  
End Products

**SEC Online**

Registration Procedures  
Teacher Site Navigation  
Report Generator (Teacher) features, functions  
Report Generator (Administrator) features, functions  
Site Set-up Procedures  
Costs and Payment Procedures  
Grouping Parameters/Strategies  
Resources Section

**Survey**

Items  
Response Codes  
Reporting Period  
Target Class  
Scales  
Registration Info / Privacy Policy  
Paper (procedures, contacts, turnaround/posting online)  
Versions (dates, distinctions, subjects)