RAC North Central
For Educational Needs Assessment

A Report to the
U.S. Department of Education
On Educational Challenges and Technical Assistance Needs
For the North Central Region

Prepared by the
North Central Regional Advisory Committee
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Preface

The U.S. Department of Education commissioned this report of the North Central Regional Advisory Committee (NC RAC) for Educational Needs Assessment under a contract number ED04CO0043/0001 awarded to The CNA Corporation (CNAC). Members of the committee and their professional affiliations are listed below:

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Executive summary

The North Central Regional Advisory Committee (NC RAC) final report provides our assessment of the technical assistance needs of educators in our region. The technical assistance is to be provided by comprehensive centers and directed toward implementing the programs of the No Child Left Behind (NCLB) Act and achieving its goals through the use of scientifically valid teaching methods and assessment tools for use by teachers and administrators. The NC RAC first identified the major challenges and needs facing the region in improving student achievement and implementing the provisions of the NCLB Act. It then assessed the types of technical assistance that might enable educators in the region to overcome the challenges and meet the needs they face.

The assessments were based on the results of outreach to stakeholders throughout the region. The RAC disseminated information on its activities to the widest possible group of stakeholders in the region and encouraged review and comment on RAC materials as they were posted on the Web site. The RAC also created three focus groups to collect information on challenges and technical assistance needs from the perspectives of three education stakeholder groups in the region: the state department of education level, urban districts and schools, and rural districts and schools.

The RAC then grouped related challenges and needs for assistance into six major categories of challenges for presentation and discussion. Those categories of major challenges are:

- Major challenges regarding improvement, corrective action, and restructuring of schools

- Major challenges regarding data and information on students, schools, and educational administration

- Major challenges regarding recruiting, training, developing, and retaining teachers

- Major challenges for developing school leadership, curriculum alignment, and technology integration in education

- Major challenges for meeting needs of special populations

- Major challenges for educating and motivating parents in education of children, taking into account different cultural, ethnic, and working backgrounds.

The six challenge areas above are common to all states in the region. However, the states vary in their situations in meeting the challenges. Thus, each state will have its own prioritization of its challenges to be met with the federally funded technical assistance.

Several themes emerged across the challenge groups where federally supported technical assistance can best serve in the region. A common major theme was to have each technical assistance center serve as a clearinghouse to synthesize and disseminate validated, research-based information on a broad range of educational subjects including:

- Creating a network to share what works in analyzing and addressing root causes of AYP status in schools

- Making effective use of technology and its integration into instructional programs and processes

- Identifying and disseminating curriculum resources and alignment tools

- Linking student assessment and other performance information to intervention and instructional strategies

- Identifying and disseminating models and strategies for recruiting and retaining teachers and principals through models and strategies

- Identifying and disseminating professional development models for teachers and principals

- Identifying and disseminating strategies for English language acquisition and proficiency

- Addressing the needs of special education students ranging from identifying and testing them to delivering effective programs with best instructional strategies

- Sharing resources, models and strategies on how to educate, motivate and engage parents.

On issues where validated, research-based information is not available, the technical assistance may focus on undertaking case studies to find best practices in various situations (i.e., urban areas, rural areas, high performing schools in high poverty areas). The technical assistance may also provide independent and objective analyses of issues that states are exploring for change regarding NCLB.

In order to best serve the technical assistance needs of the region, the NC RAC recommends that the regional centers be well-funded in order to adequately provide technical assistance to meet the needs of the region as identified in this report and facilitate collaborative work with all stakeholders in the region. The RAC believes that national centers may have a disadvantage in providing assistance that focuses on the specific needs of the region, and may have limited reach.

Furthermore, the NC RAC recommends that the regional centers not only serve as a clearinghouse within the region, but also serve as part of a network of all technical assistance

centers. The primary focus should be on getting information to high-leverage audiences who can then communicate the information to other audiences. The centers should search for and broker existing successful strategies, and only develop strategies where no suitable strategies currently exist.

Finally, the committee recommends that the technical assistance centers recruit staff with the following capabilities to meet the needs of the region:

- Skills to collect and accurately describe current strategies that states are using to administer and implement NCLB, and then identify the strengths and weaknesses of each strategy

- Skills to evaluate and identify existing "best practices" through the use of criteria that are developed jointly with the state

- Skills to present to key audiences (as identified by states) a range of strategies and/or best practices that address priority needs

- Expertise in the use of technology in education settings, including, but not limited to, instructional management and delivery systems, student data management and analysis, and system selection and acquisition

- Expertise in process consulting to design and build implementation processes based on research where current models don't exist

- Expertise in effective methods of dissemination of information

- Knowledge of each state in the region, including the education policies and practices in reading, mathematics, science, and the priority technical assistance needs.

Introduction

The North Central Regional Advisory Committee (NC RAC) report provides a comprehensive and detailed assessment of the technical assistance needs of educators in our region in response to a directive from the Secretary of the U.S. Department of Education (ED). The NC RAC is one of ten such committees appointed by the Secretary to conduct the assessment over the period of December 2004 through March 2005. The committee first identified the major challenges and needs facing the region in improving student achievement along with implementing the provisions of the No Child Left Behind (NCLB) Act. It then assessed the types of technical assistance that might enable educators in the region to overcome the challenges and needs they face.

Legislative background

Section 203 of Title II of the Education Sciences Reform Act of 2002 (P.L. 107-279) directs the Secretary of the U.S. Department of Education to establish 20 comprehensive centers to provide technical assistance to state, local, and regional educational agencies and to schools. The technical assistance is to be directed toward implementing the programs of the NCLB Act and achieving its goals through the use of scientifically valid teaching methods and assessment tools for use by teachers and administrators in the following areas:

- Core academic subjects of mathematics, science, and reading or language arts
- English language acquisition
- Education technology
- Communication between education experts, school officials, teachers, parents, and librarians

- Information that can be used to improve academic achievement, closing achievement gaps, and encouraging and sustaining improvement to schools, educators, parents, and policymakers within the region in which the center is located
- Teacher and school leader in-service and pre-service training models that illustrate best practices in the use of technology in different content areas.

Outreach efforts and data collection procedures

During the orientation meeting in early December 2004, the NC RAC members considered various means of outreach throughout the region. They settled on two primary approaches: 1) Disseminate information on the NC RAC and its activities to the widest possible group of stakeholders in the region and encourage them to review RAC materials as they are posted on the Web site, and 2) Create three focus groups to collect information on challenges and technical assistance needs from three groups within the education community: the state department of education level, urban districts and schools, and rural districts and schools.

Getting stakeholders' input

In carrying out the first approach, members of the NC RAC made contact with thousands of stakeholders and provided information on the progress of the RAC through the following contacts:

- Education electronic mailing lists in all NC Region states
- Presidents of the state PTAs in all NC states distributed the materials to their members
- Regional Resource Center in the NC Region
- Deans of education at major research universities and other institutions of higher education in each state

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- Regional Resource Center Network and the Federal Resource Center for Special Education

- The National Charter School Association

- City Planning Councils

- Business Roundtables

- Business Partnerships

- Chambers of Commerce

- Postings on state education Web sites

- State Teachers Association

- State Federations of Teachers

- State educational organizations and associations

- State intermediate education agencies

- Local boards of educations

- Many personal contacts of the RAC members.

The contacts were given invitations to visit the NC RAC Web site, review the RAC's work products, make comments, and attend the public meetings of the NC RAC.

After the first public meeting, held on January 5, 2005, RAC members sent out follow-up reminders and invitations to their contacts to review and comment on materials posted on the RAC Web site and to attend future public meetings.

Focus groups

The NC RAC set up three focus group sessions to be completed by teleconference during the period between the first and second public meetings. The members of the RAC from the state educational agencies (SEAs) in the region provided lists of education professionals to

serve on each of the three focus groups. Teleconference meeting dates and times were set to enable the largest number of members to attend the focus group session and provide input on the challenges and technical assistance needs. One focus group was formed to address issues from the SEA perspective on NCLB, one from the urban district and school perspective, and the other from the rural district and school perspective. The urban, SEA, and rural focus group teleconferences were held on January 21, 26, and 27 respectively. The teleconferences were scheduled so the results could be reviewed and considered in preparation for and during the next NC RAC public meeting (#2), which was scheduled for February 8, 2005. Notes and summaries of the three focus group teleconferences were transcribed and then e-mailed to RAC members on February 1, 2005, for their review in preparation for public meeting #2. The three teleconference summaries were also posted to the NC RAC Web site on February 1, 2005 for public review and comment.

Data collection procedures

RAC members were provided with pamphlets, PowerPoint briefings, and other RAC-related materials to use in making contacts with educational organizations, at professional meetings, as well as in their personal and professional circles.

Each member of the NC RAC monitored the Web site to review the comments submitted by members of the public and stakeholders in response to the materials posted. The CNAC ED-RAC team collected all comments made during each week and forwarded those comments to the RAC coordinator at the end of the week. The RAC coordinator summarized the comments and provided the summaries to the RAC members several days in advance of the meetings where they were to be discussed.

A member of the NC RAC led each focus group teleconference, and the RAC coordinator served as the moderator. The leader and moderator both took notes during each

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teleconference. Each teleconference was also recorded so any ambiguities or omissions in the notes could be noted and resolved by listening to the recordings.

Data on public interest and participation

The goal of the outreach efforts was to generate public interest and gather input to the NC RAC's deliberations. The RAC Web site (www.rac-ed.org) provided the central point for giving the public access to the RAC. Table 1 provides a summary of these interactions.

Table 1: Public inputs for the North Central RAC*

Type of Input	Count
I. Enrollment on RAC Web site	506
State Agencies	81
Local Agencies	97
School Board Members	2
Principals	47
Teachers	101
Parent	22
Business	10
Higher Education	35
Researcher	14
Other	97
II. Comments	50
On Web site Forums	40
Through e-mail to the RAC Support Office	10
Through surface mail to the RAC Support Office	0
III. Views on the RAC Web site	1418
IV, Attendance at RAC Public Meetings	40

* As of February 28, 2005

- Section I of the table shows the number of enrollees on the RAC Web site from the NC Region. The Web site served as the information center for the RAC. The public was encouraged to provide comments both of a general nature and on specific RAC ideas in a variety of ways.

- Section II of the table shows the amount of input the NC RAC received through online comments and through the RAC Support Office, either through e-mail or regular surface mail.

- Section III of the table measures public interest in a more indirect way by capturing the number of times the public viewed comments on the Web site

Another indicator of public interest is attendance at RAC meetings (as shown in section IV of table 1). Each RAC convened four public meetings. In the meetings held in Washington, DC, and Houston, TX, the public was invited to observe the proceedings in person. The other two meetings were online teleconferences. For both the face-to-face meetings and the online teleconferences, the public was invited to observe with a link through the RAC Web site.

The last section of the table shows the number of public attendees at RAC meetings, either in person or through the Web site.

Regional background

This section provides some background information for the NC Region, as identified through the public outreach activities, that helps provide a context for the remainder of the report.

Overview from public input of states and school districts in the North Central Region

Each of the states has a spectrum of districts and schools that serve varying geographic areas, population densities, economic conditions, ethnicities, and cultures. Ohio, Michigan, Illinois, Indiana, and Wisconsin have heavily industrialized regions or metropolitan areas along with suburban and rural areas. Iowa and Minnesota have a few metropolitan, industrialized areas but are otherwise largely suburban and rural in nature.

 Almost all districts and schools in the region have been experiencing, to varying degrees, reductions in state and local funding as well as staff reductions. Many older school facilities are frequently in need of repair and modernization. This includes the upgrading older facilities to accommodate modern technology, which is often difficult and expensive.

Governance of education in the states in the region varies from local control in Iowa, Minnesota, and Wisconsin to more centralized control in other states. Each of the seven states in this region demonstrates a strong commitment to and support for public education at the state and local level. On many national measures, such as ACT and NAEP assessments and high school graduation rates, these are among the top states year after year. Despite many measures of success a gap still exists in all seven states between the achievement level of economically disadvantaged children, children of color, and their peers. Although each state has unique needs and challenges in closing this gap several common challenges are evident.

The large, city-center districts and schools in the region share many common challenges, such as housing problems and homelessness, student mobility, adverse local economics and poverty, ethnic diversity, as well as an increasing immigrant population with its associated diversity. Population growth and changing distribution in urban/suburban regions result in districts and schools that may be growing rapidly in student population and are challenged to keep up with teacher, classroom, and facility needs. The loss of manufacturing companies and jobs in the region adversely affects household and local government incomes and budgets.

Rural districts tend to have few students spread over large areas and are losing student population. Thus, opportunities for students and educators may become limited. Some rural areas serve largely Native American student populations with unique challenges. A particular challenge of rural districts and schools is recruiting and retaining high quality teachers, staff, and leaders that meet certification and licensure requirements. Those personnel are attracted to and recruited by other districts and schools with more favorable pay and benefits or conditions. In many rural schools the principal is often the only staff member handling compliance and reporting requirements for all of the mandated education programs—federal, state, and local.

Several general trends underlie the challenges that confront districts and schools in the region. The decline in the manufacturing industry tends to decrease tax revenues to state and local governments as well as lowering family incomes. The agricultural trends include more corporate ownership and operation of farms, causing a decline in family farms. Rural and small town populations decline as employment opportunities in agriculture-related operations and businesses decline. Funding also continues to be a challenge in meeting the requirements of NCLB. Finally, all states serve diverse student populations with unique challenges.

Educational challenges in the North Central Region

This section details the results of NC RAC's deliberations and outreach efforts completed during the months of December 2004 through mid-March 2005. The RAC identified educational challenges and needs for improving student achievement as well as the management and administration of education in the context of NCLB.

This section is organized into categories of related challenges. We discuss each of the challenges and needs for assistance within each category as follows:

- Discuss the challenge and needs

- Discuss the effects on stakeholders (i.e., decisions by policymakers, educators, parents) and the implications for technical assistance.

- Discuss barriers to meeting the challenge and needs.

- Discuss types of technical assistance that would address each of the region's listed needs.

- Discuss federally supported technical assistance that could best contribute to helping state and school districts and stakeholder groups improve school performance and student achievement relative to that listed need.

These five categories of challenges are not ranked in any way. Each state in the region has its own priorities for the technical assistance it needs to address its own particular challenges.

Major challenges regarding improvement, corrective action, and restructuring of schools

1. Building the capacity at the state and district level to meet the technical assistance/support team's requirements of the law for schools not making adequate yearly progress (AYP)

The **capacity** consists of the capabilities and means to:

- Analyze data and identify the problems at the root of the AYP status in each state

- Set standards for the qualifications of the personnel needed to address the problems

- Identify and select qualified personnel or candidates to train to the required qualification level

- Obtain or form teams of qualified, capable, and trained personnel who are available and willing to address the problems

- Deploy teams of qualified personnel to the schools to address the problems

- Evaluate the performance of the teams in terms of their effectiveness in improving the education processes and results and in using measures that can be related to student achievement and AYP of a school.

The major challenge facing states is building the capacity of SEAs to provide support teams to all identified schools. This challenge has broad effects on all stakeholders in education. Policymakers must provide and support the means for building, qualifying, and establishing school support teams to address AYP-related problems.

The barriers to building capacity are implicit within each step of the processes outlined above, and each state is unique in where it stands in the process. SEAs must have the means— budgetary means, administrative support, data systems, and the collaboration of those who are being served, including school administrators, teachers, and higher levels of education administration and management.

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All levels of education agencies may need technical assistance here, possibly in the entire range of building capacity, depending on the situation. The technical assistance work may range from analyzing data and identifying problems at the root of the AYP status of a school to developing and implementing strategies for addressing the problems. The educators may need help in addressing the following questions: What are the specific problems and how can we identify them? What resources do we have available to address the specific problems? How can we best increase our capacity for fielding support teams? How can we most efficiently and effectively employ those resources?

To address this challenge, federally supported technical assistance should focus on the effective use of technology in order to better support issues of limited staff and resources. The technical assistance center should also work with each state to create a personalized state plan that takes into account the uniqueness of each individual system. Finally, the technical assistance can create a network to share research on what works, the analysis of the root causes of AYP statuses, and issues of funding, staffing, and professional development that can be shared.

2. Provide best practices for each phase of AYP that is situation specific

Each phase of AYP status may involve a different mix of issues that must be addressed. Teachers and administrators at the state, district, and school level, need technical assistance to enable them to have easy access to the best practices and lessons learned from those institutions and individuals who have been through similar experiences. The state NCLB administrators expressed a need for technical assistance in:

- Aligning school improvement efforts that cut across federal and state funding streams, programs, and divisions at the local and state levels
- Identifying and accessing the tools, means, data, and best practices to review and analyze school systems

- Performing cost and benefits tradeoffs in selecting, implementing, and supporting alternative strategies and programs.

The barriers discussed include:

- Limited access to any current databases

- Technology constraints in getting online access

- Professional development issues related to the effective use of technology

- Scope of the efforts required to address needs

- Availability of the technical expertise needed

- Time and resources required for the efforts.

A clearinghouse of best practices and lessons learned that is available online and has search capabilities might enable better access. The technical assistance should also undertake case studies to find the best practices in various situations (i.e., urban areas, rural areas, high performing schools in high poverty areas).

3. Provide independent analysis for states on issues relating to the implementation of NCLB

There is a strong need for reliable, constructive information on issues related to NCLB (i.e., student achievement in reading, mathematics, and science). Often, education policy is made by people who are not a part of the education system, and policy expertise is needed when discussing issues regarding NCLB.

Currently, it is difficult to have an independent analysis on these issues since all groups have something at stake with regard to the implementation of NCLB. It is difficult to find an objective analysis within the system because of competing interests and positions.

The federally funded technical assistance can provide the independent, objective analyses of issues that states are considering for change with regard to the implementation of NCLB.

These analyses can be used to influence policymakers by bringing some of the best research and practices to the attention of the people who have influence over the education systems.

4. Monitoring and evaluating supplemental service providers and their performance

The large urban and suburban districts and school systems are attractive markets for supplemental service providers. Some urban districts even have an excess of willing providers. The rural areas and smaller districts are less attractive markets for supplemental service organizations because they typically are more distant or remote, have lower densities of schools, and sometimes have unique economic or cultural characteristics. The more distant or remote the rural locations, the more difficult it is to get service organizations and personnel to serve them.

Timing and resource limitations have necessitated employing teams and supplemental service providers without the means in place (i.e., plans, data systems, and management processes) that would enable evaluation of their performance and management of their operations. Typically, the data available now are the student achievement scores on the state assessments. Those data usually are available too infrequently and are delayed too long after the delivery of the services to be of use in assessing and managing the performance of the service providers. Also, they are gross measures of the effects of all educational treatments applied and cannot be associated with only the contribution of the supplemental service providers' efforts. More direct and timely assessment of the performance of service providers is required if they are to be managed more effectively.

In order to address the challenges of providing supplemental services in rural areas, the federally funded technical assistance should serve as a clearinghouse for resources that are available. It should also suggest alternative effective electronic means of delivery. In order to assist the state in analyzing the effect of supplemental service providers, the technical assistance

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could recommend a voluntary minimum standard across all states as well as criteria and measures for effective supplemental service providers.

Major challenges regarding data and information on students, schools, and educational administration

1. Identifying, developing, and maintaining useful and appropriate student information and instructional data management systems that can be used practically at the state, district, school, and classroom level

What types of systems, current and alternative, will meet the additional requirements imposed by NCLB on data collection, analyses, and reporting? Educational organizations want to avoid having to make major investments in new data systems, equipment, software, and the retraining required for implementation. They want to avoid the complexity of multiple or additional systems into which largely the same or similar data must also be entered. They want systems that: are practical and easy to use, maintain, and support; and that provide useful, appropriate, common, and consistent data within and across districts that meet requirements. More collaborative and cooperative means for evaluating, selecting, and purchasing data and information systems (and upgrades to current systems) across larger aggregations of education agencies and organizations, such as within a region or even a state could, produce possible cost reductions (in purchase and support costs) as well as the increased benefits of system commonality and comparability across groups.

A major barrier is that the educators are dependent on the data system vendors for information about systems' capabilities to meet the requirements; for providing system maintenance and support; and for training staff and teachers in use of systems. The complexity of the testing processes and methods, data collection, statistical analyses, and the interpretation of results is also a barrier to meeting this challenge. In addition, the costs of acquiring new system capabilities are not reimbursed in the title funding.

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Technical assistance should pay close attention to the specific needs of each state since each has unique systems in relation to this challenge. The assistance should help states identify effective instructional data management systems. As part of this, in conjunction with the states, the center should assist in matching data systems with state systems and aligning them with state standards. Also, all levels of the system need assistance in understanding how to use the data available to improve student achievement. To this end, the technical assistance can create a composite of various systems across the country that has worked in different areas (i.e., urban, rural).

2. Showing teachers how they can use student assessment and other performance data to select appropriate instructional strategies

Given timely access to individual student assessment and other performance data, teachers and administrators need information on alternative, research-based instructional models and strategies that have been effective in similar situations. They also need access to the underlying tools, methods, and research to be able to better judge the "fit" of the results to their situations and student demographics.

Three barriers were discussed most frequently: (1) the first is the lack of timely data about their students; (2) the second is difficulty in identifying and accessing information on alternative, research-based instructional models, strategies, and results that are relevant to their situations; and (3) the third is getting the necessary assistance to perform the preparatory work required for adapting and implementing the alternative models and strategies to their situations.

The technical assistance required here is a clearinghouse to synthesize and disseminate the validated research information that exists on linking student assessment and other performance information to intervention and instructional strategies. That information must be

formulated into a practical guide of recommended strategies for educators. It also should be useable for self-study or for more formal professional development work.

Major challenges regarding recruiting, training, developing, and retaining teachers

1. Recruiting a diverse population and having models for recruitment and retention

It is particularly challenging to recruit and retain teachers to meet the needs of our increasingly diverse student populations in both rural and urban areas. The recruitment barriers are the locations and conditions that are less attractive to the teachers and staff. The small rural schools need teachers with certifications in multiple subjects if they are to meet staff qualification requirements. The urban schools have problems in attracting new teachers and in motivating experienced, highly qualified teachers to move to less attractive school situations.

Technical assistance is needed to identify non-traditional pathways and alternative methods for recruitment and retention that keep the quality and standards as set by the states. To deliver this assistance, the center should serve as a clearinghouse of different models and strategies, in order to connect people across the region with others in similar situations.

2. Identifying cost-effective and practical teacher training and professional development models and research that translate into instructional practices

There is a clear need for technical assistance to identify, document, disseminate, communicate, and propagate teacher training and professional development models and research that can be translated into improved practice. Given the tight budget environments and other resource constraints of educational systems, the emphasis is on cost-efficient, practical, and effective in raising student achievement

This challenge is rooted in the difficulties in allocating a teacher's or staff member's time and other resources required to enable the professional development. The districts, schools, and

higher education institutions need to address this challenge more systematically by enabling more efficiency and effectiveness in processes and programs for training, professional development, and retraining and ongoing training of teachers and staff. Also, there is reluctance in some districts and schools to even acknowledge and accept the need for professional development. This reluctance is partly motivated by a lack of time and resources for quality professional development.

Technical assistance can address this challenge by serving as a clearinghouse of current best practices in professional development while also comparing and contrasting the different approaches. Also, the assistance should be able to analyze, based on various situations, necessary skill sets for teachers.

Major challenges for developing school leadership, curriculum alignment, and technology integration in education

1. Lack of dissemination of research-based models on principal/superintendent leadership for states

One phrase repeated several times in our outreach was: "Where there is good school leadership, good things are happening." The challenge is to give operational meaning to building and maintaining that kind of leadership. There is also a lack of information provided to districts on how to recruit, retain, and train effective leaders.

One of the barriers to this challenge is the lack of a system through which information on what works can be accessed. Currently, all districts are going it alone and are having to develop their own models and practices. Adding to this difficulty is that each state system has its own unique needs, which complicates the sharing of strategies.

The technical assistance center can serve as a clearinghouse for translating research-based models into practice by identifying multiple models that have been used successfully to

meet the needs in a variety of situations. The clearinghouse should also disseminate research-based principal competencies. The technical assistance center should provide information on what is working and thus facilitate state initiatives to implement research-based models. This research should be translated into implementation practices.

2. Identify, evaluate, and disseminate information on curriculum alignment technologies that are available to states and districts

There is a need for each of the states and districts to have curriculum resources and assessments aligned to standards. There are currently many good resources available that are not aligned to the standards. There is also a lack of information that is accessible to states, administrators, and teachers to use in assessing and aligning resources to standards. Many states and districts in the region lack the capacity to align resources to the state standards.

In order to best address this challenge, the technical assistance should identify alignment tools available to states, districts, administrators, and teachers, while addressing the strengths and weaknesses of each tool. If these alignment tools are not available, the technical assistance center should assist the states in developing alignment tools that map resources to standards.

3. Finding and disseminating research-based professional development models that integrate the use of technology into curriculum instruction for literacy and mathematics

The integration of technology is a broad and deep challenge with many dimensions. Educators are struggling with effective integration of information technology to enhance their daily curriculum for reading and mathematics. There is the promise that information technology is an essential part of progress in many education processes.

Significant barriers are time and effort required to develop educational processes and particularly units of instruction that integrate the subject matter with the technology. There are still technology skeptics in the education communities. Their challenge is the need for

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convincing results of demonstrations, evaluations, and assessments that prove technology really can make a significant difference in student achievement levels and in improving schools and many education-related processes.

Technical assistance should identify models for technology integration that are proven, effective, and comprehensive in integrating information technology into instructional programs and processes. Teachers and staff must be provided with appropriate professional development for effectively integrating technology into curriculum instruction for literacy and mathematics. The professional development requirements may vary within and among states.

Major challenges for meeting needs of special populations

1. Focusing on English Language Learner (ELL) issues, including alternative assessments, instructional strategies, mobility, and understanding of cultural differences

The educational processes of ELL often take place in environments of diversity, poverty, mobility, limited access to healthcare, concentrations of ethnic students, and even homelessness. The needs areas include: teaching core subjects; developing language, comprehension and problem solving skills; and assessing and diagnosing strengths and weaknesses using standardized and performance-based assessments.

The barriers are implicit in the characteristics of the environments and suggest the many associated problems of delivering targeted strategies and quality services to them.

The technical assistance should serve as a clearinghouse of strategies that focus on English language acquisition as well as English language proficiency.

2. Focusing on issues related to special education

The special education student population faces challenges in meeting the achievement objectives in reading and mathematics under NCLB. The education system must continue to

address the issues and needs of the special education population while raising their achievement level.

One of the biggest barriers in addressing the needs of special education students is the correct identification of students as having special needs. Too often, students are identified as having special needs based on demographics instead of being based on testing. Finally, in the current system, special education assistance works with special education educators, whereas general educators are in need of this information too.

Technical assistance to address the needs of the special education population should focus on dissemination of effective program delivery models and best practices of differentiating instruction. The assistance should also support the identification and testing of students for special education.

3. Addressing the needs and closing achievement gaps for all at-risk students

The needs of all students and sub-populations must be addressed within the education system. There are gaps in achievement based on specific student characteristics that are prevalent throughout the region. There is also a need for educators to develop cultural competencies to address the needs of students and families.

Limited access to information on how to address the needs of at-risk students leaves states and districts searching for their own methods and programs. Additionally, each situation is unique and requires an approach that addresses its own special requirements.

To address the issues of all at-risk students, technical assistance should again provide models of best practices and disseminate available information to all stakeholders. This information should include methods that are based on all types of scenarios and case studies.

Major challenge for educating and motivating parents in children's education, taking into account different cultural, ethnic, and working backgrounds

There is a strong need to involve parents in the education of their children. In order to do this, the parents must first understand that they are active partners in their children's education. States/districts must have multiple and effective ways of communicating with parents to partner in the educational achievement of their children.

The most common barrier to parent involvement is a lack of understanding of the educational system and the importance of being an active participant in their child's education. Many parents are disenfranchised by the current system, and lack the understanding of how to effectively access the system and become involved. It is also important for parents to understand the opportunities available and the possibilities for post-secondary education.

The technical assistance can best serve as a clearinghouse to share resources and research-based models and strategies on how to educate, motivate, and engage parents.

Conclusions and recommendations

The six challenge areas discussed above are common to all states in the region. However, the states vary in their situations in meeting the challenges. Thus, with the federally funded technical assistance, each state will have its own priorities for meeting its challenges.

The NC RAC recommends that the network of technical assistance centers be set up so that there are enough resources available in each region to facilitate collaborative work with all stakeholders in the region. The RAC believes that national centers may have a disadvantage in providing assistance that focuses on the specific needs of the region and may have limited reach. The regional centers must be well funded in order to adequately provide technical assistance to meet the needs of the region as identified in this report.

Furthermore, the NC RAC recommends that the regional centers not only serve as a clearinghouse within the region, but also as part of a network of all technical assistance centers. Primary focus should be on getting information to high-leverage audiences who can then communicate the information to other audiences. The centers should search for and broker existing successful strategies, and only develop strategies where no suitable strategies currently exist.

Finally, the committee recommends that the technical assistance centers recruit staff with the following capabilities to meet the needs of the region:

- Skills to collect and accurately describe current strategies that states are using to administer and implement NCLB, and then identify the strengths and weaknesses of each strategy

- Skills to evaluate and identify existing "best practices" through the use of criteria that are developed jointly with the state

- Skills to present to key audiences (as identified by states) a range of strategies and/or best practices that address priority needs

- Expertise in the use of technology in education settings, including, but not limited to, instructional management and delivery systems, student data management and analysis, and system selection and acquisition

- Expertise in process consulting to design and build implementation processes based on research where current models don't exist

- Expertise in effective methods of information dissemination

- Knowledge of each state in the region, including the education policies and practices in reading, mathematics, and science, and the priority technical assistance needs.

Appendix: Biographical information about members of the NC RAC

Charlie Hollerith, Chair, Principal, Harlem High School - Charlie Hollerith is currently the principal at Harlem High School, a comprehensive suburban high school of 2,400 students, located in Machesney Park, IL. Prior to becoming the principal, Hollerith taught as a social studies teacher for 12 years. He later became involved in comprehensive school reform, working with the Illinois Alliance of Essential Schools. He then served three years as Associate Principal of Curriculum and Instruction at Harlem High School before becoming Principal.

Mitchell D. Chester, Ph.D., Assistant Superintendent for Policy and Accountability, Ohio Department of Education - Mitchell Chester began his tenure as Assistant Superintendent with the Ohio Department of Education in the summer 2001. His responsibilities in Ohio have included standards, assessments, accountability, policy development, and strategic planning. From 1997 through 2001, he served as the Executive Director for Accountability and Assessment for the School District of Philadelphia, where he headed the offices of Assessment, Research and Evaluation, Student and School Progress, and Pupil Information Services. Prior to working in Philadelphia, Dr. Chester was Chief of the Bureau of Curriculum and Instructional Programs of the Connecticut State Department of Education, where he oversaw subject area programs, including the development of state content and performance standards; compensatory education; bilingual education; educational technology; comprehensive health education; and instructional television programming for Connecticut students in grades K-12. While working for the Connecticut State Department of Education, Dr. Chester helped to develop standards and performance assessments for novice and experienced teachers and school administrators.

Dr. Chester's publications address accountability and assessment, the knowledge base for school administration, teaching in urban schools, and teacher induction and retention. He was a teacher, assistant principal, and curriculum coordinator. His doctorate in Administration, Planning, and Social Policy is from Harvard University. In addition, Dr. Chester holds advanced degrees from the University of Connecticut and the University of Hartford.

Linda Christensen, Director of Instruction, Verona Area School District - Linda Christensen is the Director of Instruction for the Verona Area School District in Wisconsin. In her role, she coordinates the district's assessment program as well as staff development and curriculum development efforts. She also serves on Wisconsin's ESEA Testing Advisory Committee.

Ann Clapper, Research Associate, National Center on Educational Outcomes - Ann Clapper is a Research Associate with the National Center on Educational Outcomes (NCEO) at the University of Minnesota. Her work focuses primarily on issues related to access to the general education curriculum for students with disabilities. Prior to coming to the University of Minnesota, she was the Director of Curriculum Leadership and Improvement for the North Dakota Department of Public Instruction.

Brent Clark, Superintendent, Belleville Township High School District #201

Patricia Coles-Chalmers, Assistant Superintendent of Teaching and Learning Services (TLS), Kalamazoo Public Schools - As the Assistant Superintendent of TLS, she is responsible for grades preK-12. She received a Bachelor of Science Degree in Art Education from West Virginia State University and a Master of Arts Degree in Special Education with emphases on special needs students, including the gifted students from West Virginia University. Between her bachelor's and master's degrees, she attended Farleigh Dickerson University and William Patterson College, both located in New Jersey, to get her certification in elementary education.

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Prior to moving to Michigan she was a USO Program Director in France and Germany, a Field Executive for the Girl Scouts in New Jersey and a Teacher Specialist in New Jersey. She worked for the Mahwah Public Schools in New Jersey for nine years before moving to Kalamazoo, Michigan. She was a teacher, Instructional Specialist, Assistant Principal, and Principal in the KPS District for 21 years prior to being appointed the Assistant Superintendent. Although most of her time is devoted to the education of all children, she serves on many boards and committees in service to the Kalamazoo community as well as received many awards for her continued contributions.

Thomas Evert, Ph.D., Superintendent, School District of Janesville - Hired as School District of Janesville Superintendent in August 1995, the focus of his superintendency is on increasing student learning and achievement, accepting and encouraging diversity, and increasing parental involvement. He has served as a Wisconsin educator for 34 years in three districts—Beloit, Sheboygan, and Janesville—as a school psychologist, student services director, and high school principal. He has met the criteria for hours of classroom instruction in order to qualify for an administrator's license. He is now in his 10th year as Superintendent of the Janesville School District. He is active in a variety of community leadership positions including the Rock County CEO Roundtable on Recruitment and Retention of Minority Staff. Tom has served in the Children's Service Society and the YMCA Board of Directors. He holds a B.S. in psychology and a MSE in school psychology from UW-Eau Claire, a Ph.D. in educational psychology from UW-Madison, and has done postdoctoral work in educational administration. Evert recently served as State President of the Wisconsin School District Administrators' Association.

Mary Flahive, Mathematics Professional Developer, Cleveland Municipal School District - Mary Flahive works for the Cleveland Municipal School District and has been a teacher for 21 years. She currently serves as the Mathematics Professional Developer in a K-8 building in

Cleveland's inner city. In this role, her primary responsibility is to model standards-based lessons in primary and upper elementary classrooms. Ms. Flahive also designs and presents Professional Development opportunities for teachers in her building and ensures that math manipulatives and technology are available for student enrichment. She co-authored Short-Cycle Assessments for grades 3, 4, 5 and 6, and has facilitated at mathematics workshops sponsored by the Cleveland district and Cleveland State University. She presented at the Teacher-to-Teacher Workshops during the summer of 2004. Ms Flahive is currently serving on the Ohio Mathematics Academy Program (OMAP) Advisory Committee.

Sharnell Jackson, Chief eLearning Officer, Chicago Public Schools - Sharnell Jackson is currently the Chief eLearning Officer for the Chicago Public Schools (CPS) Office of Technology Services and has served as an educator for more than thirty years. Previously, she was the K-12 Educational Technology Manager for the Chicago Public Schools for Reading, Mathematics, Science Initiatives and Professional Development. She is responsible for the CPS Virtual High School program available to all high school and elementary students. She is currently the Past President of the Illinois Computing Educators for the State of Illinois. Sharnell has helped develop implement, and manage a district instructional management system focused on advancing teacher knowledge and skills that support increased student achievement in core content areas, assessment, and use of data to improve instruction for teachers and students. She has served on various educational technology task forces, advisory groups, blue ribbon panels, local, state and national conferences, received numerous honors, recipient of a NASA fellowship for math, science, instructional technology, and participated as writing and assessment team member of the National Educational Technology Standards for Teachers.

Judy Jeffrey, Director, Iowa Department of Education - Judy Jeffrey is the Director for the Iowa Department of Education. She most recently served as the administrator in the

Department's Early Childhood, Elementary and Secondary Education division. Prior to that, she served 24 years in the Council Bluffs Community School district in various administrative and classroom teaching positions. Judy also has been an instructor at Creighton University, and has taught in other Iowa districts including Cedar Falls and Goldfield, where she began her teaching career in 1964. She was president of the Council of Chief State School Officers Deputy Commission from 2001-2003 and currently sits on its board of directors. Judy earned her bachelor's degree from the University of Northern Iowa in 1963 and her master's degree in 1981 from Creighton University.

Marilyn Jones, President, Indiana Parent Teacher Association - Marilyn Jones has a B.S. from Purdue University an M.S. from Indiana University. She is a resident of Hammond, Indiana, where she has participated in many community activities. She currently is a member of the Hammond Education Foundation Board of Directors, the Survive Alive House Advisory Board and a community member of the Warren G. Harding Elementary School Plan Team. An elementary teacher for 27 years, she retired in 2001. A longtime volunteer in Hammond PTAs, she has served on the Indiana PTA Board of Managers for 10 years. During those years she held the office of treasurer and president elect. She is currently the President of the Indiana PTA.

Phyllis Land Usher, Deputy Superintendent, Indiana Department of Education - Phyllis Land Usher works for the people of Indiana at the State Department of Education. She has served as Assistant Superintendent, Senior Officer, Division Director and Consultant for Instructional Media during her 30-year tenure with the state education agency. She has degrees from the University of Southern Mississippi and the University of Tennessee Knoxville and has done additional educational work at Indiana University, Purdue University, and Utah State University. Outside her career work, Phyllis serves on numerous boards and commissions in Indianapolis and is the president of the Usher Funeral Home, Inc.

Quentin Messer, Jr., Director of Community School Sponsorship, Fordham Foundation - Quentin L. Messer, Jr. is the Director of Community School Sponsorship for the Thomas B. Fordham Foundation (TBFF). Unaffiliated with Fordham University, TBFF is a national education policy organization with offices in Washington, DC, and Dayton, OH, committed to market-based education innovation premised on the belief that all children can learn regardless of birth circumstances. Quentin heads the Thomas B. Fordham Foundation's charter school authorizing efforts in Ohio, where TBFF was the first 501(c)(3) organization approved by the Ohio Department of Education to authorize charter schools (community schools as they are known in Ohio). A licensed attorney and former entrepreneur, Quentin serves on the National Board of the Black Alliance for Educational Options (BAEO) and is the married father of two.

Dave Morrison, Director of Bands, Prospect High School - David Morrison received his formal training in music at the University of Illinois, where he earned his Music Education B.S. in 1973 and his master's degree in 1977. From 1973 to 1977, he was Director of Bands at East Richland High School in Olney, Illinois. From 1977 and continuing to the present, he has been the Director of Bands at Prospect High School, in Mt. Prospect, IL, where he has developed and maintained a nationally recognized band program for the past 28 years. Honors that he has received include the Citation of Excellence from the National Band Association (six times for concert band and once for marching band), election to the Phi Beta Mu National Band Director's Honorary Fraternity, winner of Outstanding Contributions to Education Award at Prospect High School on two occasions, Outstanding Chicagoland Music Educator Award in 1992, the Shining Star Award 1995, nomination for the Golden Apple Award in 2001. This past year Mr. Morrison was honored as the Illinois State Teacher of the Year and was inducted into the Band Director's Hall of Fame.

Dan Nerad, Ph.D., Superintendent, Green Bay Public Schools - Daniel Nerad has been Superintendent of Schools in the Green Bay Area Public School District since July 2001. Prior to his appointment as Superintendent, he served in a variety of roles in the district, including Assistant Superintendent for Curriculum and Instruction and Executive Director of Curriculum. His work is dedicated to the proposition that all children can become proficient learners and caring, contributing members of society. In his various roles within the district, he has worked to involve parents/guardians and the broader community in schools. Nerad views collaboration with the community as a critical role for schools. As Superintendent of Schools, he has also emphasized helping staff develop the skills necessary to be successful in their work with children. Nerad serves on a variety of local boards and completed his doctorate at Cardinal Stritch University.

Angela Newing, Eighth Grade Mathematics Teacher and Curriculum Leader, Ann Arbor Public Schools - Angela Newing has taught mathematics for over 10 years at Forsythe Middle School in Ann Arbor, MI, and has served as the school's mathematics curriculum leader for over six years. She is certified in mathematics and computer science and is a "highly qualified" teacher according to the standards set forth by NCLB. She was awarded the 2003 Presidential Award for Excellence in Science and Mathematics Teaching. She was also selected to serve as Michigan's Math Ambassador for the Figure This! national campaign. She has provided professional development for numerous school districts throughout the state of Michigan. She is a member of the National Council of Teachers of Mathematics and the Michigan Council of Teachers of Mathematics. Outside of work she enjoys spending time with her husband and two children.

Ginger Reynolds, Ph.D., Assistant Superintendent for Teaching and Learning Services, Illinois State Board of Education - Dr. Reynolds is the Assistant Superintendent for Teaching

and Learning Services of the Illinois State Board of Education. She oversees the management of the ISBE divisions of Student Assessment, Certification, Data Analysis and Progress Reporting, Curriculum and Instruction, Early Childhood, Federal Grants and Programs, Accountability, Career Development, English Language Learning, and the Chicago Regional Office of Education. She also is responsible for implementing most aspects of the NCLB Act of 2001. Before joining the ISBE, Dr. Reynolds worked in the Office of Policy and Networks at Learning Point Associates. She has published papers on teacher quality, technology in education, and closing the achievement gaps. Ginger taught for the University of Illinois at Urbana-Champaign in the Department of Educational Policy Studies and in the College of Education and Human Development at the University of Minnesota. She also has served as Dean of Instructional Programs at Rasmussen College in Minnetonka, Minnesota. Dr. Reynolds received a master's degree in Philosophy of Education and a doctorate in Educational Policy Studies from the University of Illinois at Urbana-Champaign.

Celestine Sanders, Middle School Principal/Title I/At Risk Curriculum Coordinator, Thomas-Gist Academy - Celestine Sanders is an educator with 34 years of experience who advocates that all children can learn. Thirty years were spent in a traditional setting as a teacher, learning consultant, secondary reading teacher, assistant junior high principal, elementary principal, and junior high/middle school teacher, and the last four years have been in a charter school. She attended school in Inkster and graduated from Inkster High School with honors. Following this, she attended Michigan State University, Philander Smith College in Little Rock Arkansas, and finally Eastern Michigan University where she received a Bachelor of Science degree in Elementary Education with a K-8 Certification in all Subjects. She continued her studies and received a Master of Arts degree, and Continuing Certificates in Elementary and Secondary Education, and a Secondary Certification in English. Celestine received her

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Administrator Certificate Endorsement in Central Office and Elementary from the Michigan Department of Education. She is a lifelong learner as is evident in her K-12 Certification in Reading and Middle School Endorsement. She attended additional postgraduate work and received her Educational Specialist degree from Wayne State University and is a candidate in the doctoral program there. U.S. Secretary of Education Rod Paige recognized Celestine's school, Thomas-Gist Academy, North Campus in Inkster, MI, for showing that "No Child Left Behind" does work.

Alice Seagren, Commissioner, Minnesota Department of Education - Alice Seagren was appointed by Governor Tim Pawlenty as the Commissioner of the Minnesota Department of Education (MDE) in July 2004. As Commissioner, she is responsible for MDE operations and policymaking for all aspects of K-12 education, implementing the NCLB Act in Minnesota, early learning, libraries, and adult, career and technical education. Prior to her appointment, she served six terms in the Minnesota House of Representatives. During her legislative career she was Chair of the House Education Finance Committee and member of the Education Policy, Education Finance, Ways and Means, and Transportation Policy committees. Before winning election to the Legislature, she served on the Bloomington School Board and has been a volunteer in her church and in the community. She is currently a board member of the Normandale Community College Foundation Board and Fraser Community Services, an organization providing services to the disabled. On the national level, Representative Seagren has served as Chair, Education Committee, National Council of State Legislatures, Assembly of State Issues, reflecting her commitment to education and helping people become self-sufficient. A graduate of Southeast Missouri State University with a B.S. in Marketing, Commissioner Seagren is married and has two children.

Richard Stoff, President, Ohio Business Roundtable - Richard Stoff is the founder and president of the Ohio Business Roundtable, an independent, nonpartisan organization comprised exclusively of the Chief Executive Officers of the state's largest and most influential corporations. Established in 1992, the Roundtable was created in the belief that business leaders, in a pluralistic society, should have an active and effective role in framing public policy. The Roundtable is highly selective in the issues it addresses, working only in areas where the business experience of its CEO members can make a significant difference to effect innovative change benefiting all Ohioans. Its policy agenda is focused on enhancing competitiveness in the business climate, tax policy, economic development, science and technology, civil justice reform, and K-12 education reform. Prior to his appointment as President of the Roundtable, Mr. Stoff served as a partner in the management consulting practice of Ernst & Young. He began his career as budget analyst at the state and local level. A native of New York City, Mr. Stoff received his B.A. in political science, with honors, from Northeastern University in 1972 and his M.P.A. in 1975 from The Maxwell School of Citizenship and Public Affairs at Syracuse University, where he concentrated in public finance.

Mike Thompson, Federal Policy Advisor, State of Wisconsin Department of Public Instruction - Mike Thompson serves as the Federal Policy Advisor to the State Superintendent of Public Instruction. He has been involved in the implementation at the NCLB legislation since the law was proposed in January 2001. Prior to serving as Policy Advisor, Mike has served the state education agency as an education consultant, Director of Student Services, and the Assistant State Superintendent for the Division of Equity and Advocacy.

Carol Wolenberg, Deputy Superintendent, Michigan Department of Education - Carol Wolenberg is Deputy Superintendent with the Michigan Department of Education, a position she has held since April of 1995. She is responsible for executive direction of the administrative

service areas. In addition, Ms. Wolenberg directs and coordinates new and existing collaborative policy development and initiatives with other state government agencies, external groups, and associations. She represents the Department on many boards and commissions, including the Communities in Schools, State Interagency Coordinating Council for Early On Michigan, the Children's Trust Fund, and Michigan Business Leaders for Education Excellence. During her tenure with the Department of Education, Ms. Wolenberg has been the Assistant Superintendent for Interagency Coordination and Special Projects, Assistant to the Superintendent, and Director of the Office of Grants and Special Projects. She has also worked in the areas of higher education, career education, and vocational education. Carol has been an instructor at the community college, adult education, and high school levels and has worked in the business community. Ms. Wolenberg earned a B.S. in Education, an M.B.E. from Central Michigan University, and has done post-graduate work in curriculum and administration at Michigan State University. She successfully completed Strategic Leadership for State Executives at The Governors Center, Duke University; the Michigan Virtual University Leadership and Policy Seminar; and the Institute for Educational Leadership Education Policy Fellowship Program.

Glossary

ACT—Formerly American College Test Program, Inc. now a corporation that provides testing and assessment services to K-16 education and educational agencies and other program

AYP—Adequate Yearly Progress, defined in the NCLB Act as a way to measure the academic achievement of elementary and secondary school students in relation individual state student academic achievement standards.

CHARTER SCHOOLS—Public schools that are largely free to innovate, and often provide more effective programs and choice to underserved groups of students. Charter schools are subject to the "adequate yearly progress" (AYP) and other accountability requirements of the NCLB Act.

COMPREHENSIVE TECHNICAL ASSISTANCE CENTERS—Centers authorized by Section 203 of the Education Sciences Reform Act of 2002 (P.L. 107-279). Appropriations for the centers in FY05 would enable the ED to support 20 centers, 10 of which must be in current regions.

COMMON CORE OF DATA—The National Center for Education Statistics' comprehensive, annual, national statistical database of information concerning all public elementary and secondary schools and local education agencies.

CONSOLIDATED STATE PLAN FOR NCLB—Plan from each state that demonstrates it has adopted challenging academic content standards and challenging student academic achievement standards that will be used by the state, its local educational agencies, and its schools.

CORE SUBJECTS—Means English, reading or language arts, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography [Section 9101(11)]. While the federal statute includes the arts in the core academic subjects, it does not specify which of the arts are core academic subjects; therefore, states must make this determination.

DFO—Designated Federal Official. He or she acts as a liaison between a federal advisory committee and federal agency and must be present at all committee meetings.

ELL—English Language Learners

FACA—Federal Advisory Committee Act was created in 1972 (Public Law 92-463) by Congress to formally recognize the merits of seeking the advice and assistance of our nation's citizens. Congress sought to assure that advisory committees: provide advice that is relevant, objective, and open to the public; act promptly to complete their work; and comply with reasonable cost controls and recordkeeping requirements.

HIGHLY QUALIFIED TEACHERS—States must define a "highly qualified" teacher. The requirement that teachers be highly qualified applies to all public elementary or secondary school teachers employed by a local educational agency who teach a core academic subject. "Highly qualified" means that the teacher: has obtained full state certification as a teacher or passed the state teacher licensing examination and holds a license to teach in the state, and does not have certification or licensure requirements waived on an emergency, temporary, or provisional basis; holds a minimum of a bachelor's degree; and has demonstrated subject matter competency in each of the academic subjects in which the teacher teaches, in a manner determined by the state and in compliance with Section 9101(23) of ESEA.

IDEA—Individuals with Disabilities Education Act

IEP—Individualized educational plan required by Individuals with Disabilities Education Act

IES—Institute of Education Sciences, the research arm of the ED that was established by the Education Sciences Reform Act of 2002

LEA—Local Education Agency

NAEP—National Assessment of Educational Progress

NCLB—No Child Left Behind Act

OESE—Office of Elementary and Secondary Education in the ED

RACs—Regional Advisory Committees that are authorized by Education Sciences Reform Act of 2002 (P.L. 107-279)

RAC QUORUM—A majority of appointed members. A RAC must have a quorum to meet or hold an official meeting.

REGIONAL EDUCATIONAL LABORATORIES—Federally supported regional institutions that have operated since 1966 and were reauthorized by Section 174 of the Education Sciences Reform Act of 2002

SCIENTIFICALLY-BASED RESEARCH—Section 9101(37) of ESEA, as amended by NCLB, defines scientifically based research as "research that involves the application of rigorous, systematic, and objective procedures to obtain reliable and valid knowledge relevant to education activities and programs." (P.L. 107-279)

SEA—State educational agency

STATE—References to "states" include the 50 states, the District of Columbia, the Commonwealth of Puerto Rico, the freely associated states, and the outlying areas.

SUPPLEMENTAL EDUCATIONAL SERVICES—Additional academic instruction designed to increase the academic achievement of students in schools that have not

met state targets for increasing student achievement (AYP) for three or more years. Services may include tutoring and after-school services by public or private providers approved by the state.

TECHNICAL ASSISTANCE—Assistance in identifying, selecting, or designing solutions based on research, including professional development and high-quality training to implement solutions leading to improved educational and other practices and classroom instruction based on scientifically valid research; and improved planning, design, and administration of programs; assistance in interpreting, analyzing, and utilizing statistics and evaluations; and other assistance necessary to encourage the improvement of teaching and learning through the applications of techniques supported by scientifically valid research (P.L. 107-279)

WHAT WORKS CLEARINGHOUSE (WWC)—Clearinghouse established in 2002 by the ED Institute of Education Sciences to provide educators, policymakers, researchers, and the public with a central and trusted source of scientific evidence of what works in education.