

The Institute for Academic Access, University of Kansas;
The Research Institute on Secondary Education Reform for Youth with Disabilities,
University of Wisconsin; and the National Center on Secondary Education and Transition,
University of Minnesota

present a Capacity Building Institute

Critical Issues in Reform and Inclusion of Youth with Disabilities in Secondary Education and Transition

July 8, 2003

Hyatt Regency on Capitol Hill
Washington, DC



Proceedings

Table of Contents

Background	page 2
Agenda	page 3
Discussion Questions	page 5
Institute Summary	page 6
Speakers' Biographical Information	page 16

Background

The National Center on Secondary Education and Transition (NCSET), the Institute for Academic Access (IAA), and the Research Institute on Secondary Education Reform for Youth with Disabilities (RISER) co-sponsored this Capacity Building Institute on *Critical Issues in Reform and Inclusion of Youth with Disabilities in Secondary Education and Transition* to present some of the latest developments in the field of secondary education and transition. The day included reflective dialogue around:

- Issues of reform, inclusion, and the intersection of reform and inclusion at the high school level;
- Research results related to improving outcomes for all high school students; and
- Methodological issues in research related to reform, inclusion, and the intersection of reform and inclusion at the high school level.

Our intention for the workshop was to provide practical, useful information that had meaningful application to participants' daily work.

In the following proceedings you will find the institute agenda, a summary of the institute, and the speakers' biographical information.

David R. Johnson, Director
NCSET

Agenda

- 7:30 Registration and Continental Breakfast
- 8:30 Welcome and Agenda Review David R. Johnson, *Director, National Center on Secondary Education and Transition, University of Minnesota-Twin Cities*
David Hancox, *Moderator*
- 8:45 Opening Remarks Louis Danielson, *Director, Research to Practice Division, Office of Special Education Programs, U.S. Department of Education*
- 9:00 *Lessons Learned at the Intersection of Reform and Inclusion in High Schools* Marlene Simon
Cheryl Hanley-Maxwell, *Professor/ Chairperson, Department of Rehabilitation Psychology and Special Education, University of Wisconsin-Madison; Project Co-Director, Research Institute on Secondary Education Reform, University of Wisconsin-Madison*
Bruce King, *Research Scientist, Wisconsin Center for Educational Research, University of Wisconsin-Madison; Principal Investigator, Research Institute on Secondary Education Reform, University of Wisconsin-Madison*
- 10:00 Q&A
- 10:15 **Break**
- 10:45 *Closing the Performance Gap in Today's High Schools* Bonnie Jones, *Project Director, Office of Special Education Programs, U.S. Department of Education*
Donald D. Deshler, *Professor, Department of Special Education, University of Kansas; Director, Center for Research on Learning, University of Kansas*
Jean B. Schumaker, *Professor, Departments of Human Development/ Special Education, University of Kansas; Associate Director, Center for Research on Learning, University of Kansas*
- 11:45 Q&A
- 12:00 **Lunch**
- 1:00 Featured Researchers and Facilitated Discussions B. Keith Lenz, *Associate Professor, Department of Special Education, University of Kansas; Senior Research Scientist, Center for Research on Learning, University of Kansas*
Brian A. Bottge, *Assistant Professor, Department of Rehabilitation Psychology and Special Education, University of Wisconsin-Madison*
Brian Cobb, *Professor, School of Education, Colorado State University; Co-Director, Research and Development Center for the Advancement of Student Learning, Ft. Collins, CO*

Lynne Anderson-Inman, *Director, Center for Advanced Technology in Education/Center for Electronic Studying, College of Education, University of Oregon*

Deborah M. Harris, *Associate Professor, Department of Special Education, University of South Florida-Tampa; Director, FUSE Research Project, Center for Research on Children's Development and Learning, University of South Florida-Tampa*

Kofi Marfo, *Professor, Educational Psychology, University of South Florida-Tampa; Director, Center for Research on Children's Development and Learning, University of South Florida-Tampa*

Albert J. Duchnowski, *Professor, Child and Family Studies/Special Education, University of South Florida-Tampa*

Krista Kutash, *Associate Professor/Deputy Director, Research and Training Center for Children's Mental Health, University of South Florida-Tampa*

Margo Mastropieri, *Professor, Graduate School of Education, George Mason University*

Fabricio E. Balcazar, *Associate Professor, Departments of Disability and Human Development/Psychology, University of Illinois-Chicago*

Teri Wallace, *Research Associate, Institute on Community Integration, University of Minnesota-Twin Cities*

Michael R. Benz, *Professor, Secondary Special Education and Transition Program, University of Oregon*

Naomi Zigmond, *Professor, Department of Instruction and Learning, University of Pittsburgh*

Valli Davis Warren, *Project Coordinator/Assistant Researcher, Research Institute on Secondary Education Reform, University of Wisconsin-Madison*

Jeffery P. Braden, *Professor, Educational Psychology, University of Wisconsin-Madison; Director, School Psychology Program, University of Wisconsin-Madison*

2:30 **Break**

3:00 Featured Researchers
and Facilitated
Discussions (con't)

4:15 **Break**

4:30 Reflections on Research in School Reform and Inclusion Russell R. Gersten, *Professor, College of Education, University of Oregon; Director, Instructional Research Group, Long Beach, CA; Director, RMC Research Corporation, California*

5:00 Closing Remarks and Evaluation David Hancox, Moderator

Discussion Questions

Keeping in mind your research, your current work situation, and what you have heard today, please respond to the following questions:

- 1.) What are the implications of the research results?

- 2.) What are the preliminary implications for research results (when taken as a whole) for:
 - a. Special education
 - b. General education
 - c. Secondary school reform
 - d. Policy development
 - e. Future research

- 3.) What are your reactions to the data?

- 4.) From your perspective, what are we missing in the current research agenda?

- 5.) What are some of the barriers to conducting this type of research? What are the key points from our discussion today that you believe are important to share with the large group?

Institute Summary

Welcome

Dr. David R. Johnson, Director of the National Center on Secondary Education and Transition (NCSET), welcomed the participants and explained the Capacity Building Institute's purposes. The overall goal of the institute is to provide researchers, practitioners, and policymakers an opportunity to discuss research and practice in the area of secondary education and transition for youth with disabilities. The Institute's three major focus areas are: issues of reform and inclusion and the intersection of reform and inclusion at the high school level; research results related to improving outcomes for all high school students; and methodological issues in research related to reform and inclusion. Dr. Johnson also acknowledged the meeting planning team, including Dr. Bonnie Jones of the Office of Special Education Programs (OSEP), U.S. Department of Education, and representatives of NCSET and the Research Institute on Secondary Education Reform for youth with disabilities (RISER). Host David Hancox and Dr. Jones welcomed the participants, and Dr. Jones introduced Dr. Louis Danielson, who presented opening remarks.

Opening Remarks

Dr. Louis Danielson, Director, Research to Practice Division, Office of Special Education Programs, U.S. Department of Education

Dr. Danielson said that OSEP sponsors research and has initiated model programs focusing on secondary education for youth with disabilities. OSEP-sponsored research includes the National Longitudinal Transition Study (NLTS), which has generated data about secondary education for youth with disabilities. NLTS has rendered evidence that the majority of youth with disabilities spend most of their school hours in general education rather than special education and that general education at the secondary level presents challenges for youth with disabilities that can lead to high dropout rates. Although dropout rates of youth with disabilities have declined slightly for several years, they still remain higher than those of youth without disabilities. High-stakes testing could reverse the trend of decreasing dropout rates. Assistant Secretary of Education Robert Pasternak is very much concerned about the problem of dropout. The U.S. Department of Education expects to make an award in 2003 to establish a center focused on school dropout.

Dr. Danielson commented that the number of researchers studying secondary education for youth with disabilities has greatly increased during the past few years, in part because of the larger number of awards funding research at the secondary school level. These investments are helping to advance the research base to support changes in the policy arena and reflect the tenets of the 1997 amendments to the Individuals with Disabilities Education Act (IDEA). The challenge for the future will be to find ways to "scale up" and transfer research evidence into practice.

Part D of IDEA relates to support infrastructure, including research. The Part D national program improvement paradigm includes authorities to address knowledge production, knowledge transfer and utilization (e.g., technical assistance and dissemination), and knowledge implementation evaluation. Line items in Part D call for research and development, technology, professional development to instill research-based practices, technical assistance and dissemination, a parent information cen-

ter, state improvement grants that support scaling up research-based practices in the states, and evaluation.

Dr. Danielson outlined factors that support scaling up research-based practices, including:

- A system to identify and disseminate research-validated practices because research is not automatically absorbed or accepted by practitioners;
- Practices clearly described in terms of essential elements and necessary resources;
- Standards of practice as external referents for change;
- Monitoring and accountability systems to support desired change (the No Child Left Behind Act provides a vehicle for accountability of outcomes, but there is no systematic accountability for program implementation in schools);
- Involvement of advocacy/stakeholder groups as catalysts and consumers;
- Technical assistance and professional development systems of sufficient intensity and duration;
- Recognition of the role of general educators and administrators; and
- Multiple leverage points at the local, state, and federal levels.

At the local level, educators are presented with many new innovations that may not be research-based. A mechanism is needed to validate commercial assertions about the research foundation of innovations. To address this need, the U.S. Department of Education established the What Works clearinghouse to assist local-level and state-level educators in assessing the research behind practices.

Lessons Learned at the Intersection of Reform and Inclusion in High Schools

Cheryl Hanley-Maxwell, Professor and Chairperson, Department of Rehabilitation Psychology and Special Education, University of Wisconsin-Madison, and Project Co-Director, Research Institute on Secondary Education Reform for youth with disabilities (RISER), University of Wisconsin-Madison

Bruce King, Research Scientist, Wisconsin Center for Educational Research, University of Wisconsin-Madison, and Principal Investigator, RISER, University of Wisconsin-Madison

Dr. Hanley-Maxwell and Dr. King discussed the work of the Research Institute on Secondary Education Reform for youth with disabilities (RISER), whose mission is to expand the current knowledge base related to practices and policies in secondary schools that enhance learning, achievement, and postschool outcomes for students with disabilities. RISER focuses on the ways in which inclusive efforts interact with reform efforts in general education, particularly in regard to efforts based on “authentic achievement.”

A major research question asked by RISER investigators is whether authentic achievement could be used to restructure school and classroom settings in order to allow all students to learn together and be successful beyond school. Five core research questions (see below) reflect the philosophy that policy and context, combined with teaching and learning, create outcomes. To examine the five core questions, RISER investigators conducted field studies in four Schools of Authentic and Inclusive Learning (SAIL). Each of these four model high schools was committed to producing authentic and inclusive learning that results from knowledge production, disciplined inquiry, value beyond school, provision of accommodations and supports, and personalization and self-advocacy. Each school

also was committed to having a strong professional community and extensive external supports. The four schools studied were:

- Clarendon Secondary School, an urban school of 520 students in grades 7-12 that is 100% inclusive, uses an interdisciplinary curriculum, includes service learning and internships as prominent features of its programs, and requires student portfolios and exhibitions for graduation.
- Mount Adam High School, a rural school of 480 students in grades 9-12 that uses personal learning plans for all students, offers options for community-based learning, and is inclusive in the lower-track classes.
- Rothbury High School, a suburban/rural school of 980 students in grades 9-12 that is 100% inclusive, has a service-learning requirement, and requires student portfolios and exhibitions for graduation.
- Seven Hills High School, a small city school of 1,000 students in grades 9-12; 28% of students with disabilities are fully included in some courses, several academic courses are team taught by general and special education teachers, and all freshmen with disabilities at the school take a study skills/self-advocacy course.

The RISER research looked at whether teaching and learning focused on authentic achievement boosted achievement for students with and without disabilities. The research design encompassed both qualitative and quantitative methods, including surveys and interviews. Three criteria were used to assess authentic student learning: construction of knowledge using higher order thinking processes encouraging the student to create and innovate knowledge; disciplined inquiry, in which the student develops a knowledge base and demonstrates an in-depth understanding of it through elaborated communication; and teaching and learning having value beyond school, with the student connecting knowledge outside of the school setting. These criteria were used to establish standards for instruction used in the school analyses.

Selected findings for each of the five core questions are summarized below.

Research Question 1: What are the critical features of instruction, assessment, and support strategies in the classroom that promote authentic understanding, achievement, and performance for all students?

To answer Research Question 1, the investigators examined assessment tasks and student work completed for those tasks in classrooms at each of the four schools; explored how students with and without disabilities performed on tasks reflecting different levels of authentic intellectual demand; and studied the connection between instruction, assessment tasks, and student work for a specified unit of study. They found that students exposed to assessment tasks with low authentic demands performed at low levels, but students with and without disabilities who were exposed to high demands performed at high levels.

Research Question 2: How have changes in authentic inclusive learning and schooling practices affected the school and postschool outcomes (and their interaction) for students with disabilities (collectively and disaggregated) using frames of reference focused on equity, value added, and accountability?

The researchers gathered input from 152 educators on the importance of postschool outcomes for students with and without disabilities and the ways in which postschool outcome data would be useful to them in their classrooms and school settings. Postschool outcomes information deemed most valuable to educators included: type of postsecondary institution, employment, or postsecondary

program; college completion status; whether the person is not working but not in school; whether the person is working and going to school; level of job satisfaction; whether a job matches student interests; job advancement; the use of self-determination/self-advocacy in daily work; and financial management skills. The educators said they would use postschool outcome data to: inform instructional practices, encourage curriculum development and change, improve student preparation for the “real world,” initiate changes in school-wide policies and practices, change faculty and staff expectations, and measure educational reform effectiveness.

A follow-up survey of 88 students asked about their postschool outcomes. The results indicated that 89% of graduates without disabilities and 72% of graduates with disabilities were attending a post-secondary education institution or program, while 83% of graduates without disabilities and 67% of graduates with disabilities had a paying job. SAIL graduates engaged in social activities at rates higher than those reported in national surveys, such as NLTS. These activities included participation in organized volunteer work, youth organizations, political groups, and church or church-related activities. Learning experiences that graduates felt were most helpful in preparing them for life after high school included locating information and resources, working in teams, solving complex problems, and using technology.

Research Question 3: How do schools accommodate district and state outcome assessments, and how do such accommodations affect the participation in, reporting of, and validity of assessment?

The researchers asked a number of questions in regard to assessments, including: Are students with disabilities included in assessment? If so, what practices and techniques support their inclusion? Do internal and external standards/assessment affect authenticity? Do they affect equity? Do assessment characteristics matter? The results indicate that students with disabilities participate fully in required assessments, but may be slightly less likely than other students to take college entrance exams. Practices and techniques that support inclusion include external policies requiring inclusion, high stakes, and use of universal design elements (e.g., negotiation with an advisor or committee and repeated opportunities for feedback and revision).

According to teachers, external standards were viewed as having neutral to favorable effects on their work, but external assessments tended to be neutral to antagonistic. Internal standards have a ubiquitous but unrecognized influence on schools, and schools with formally articulated internal assessment systems had the strongest, most consistent authenticity. External standards had no meaningful influence on student equity, and external assessments decreased exposure to authentic pedagogy. However, internal standards and assessments resulted in common processes and experiences and different expectations. Finally, the researchers found that assessment characteristics matter in terms of domains assessed (that which is tested is taught), inclusion (those who are tested are taught), format (material is taught according to how it is tested, and universal design increases meaning and inclusion), and consequences (high assessment stakes influence instruction).

Research Question 4: How do schools evolving toward authentic and inclusive instruction incorporate career development and planning for secondary and postsecondary experiences?

The investigators found that all four of the SAIL schools emphasized preparation for adulthood through career development, postschool planning, self-determination/self-advocacy, and setting high expectations for all students. “Add-on” and integrated approaches to preparation for post-school life were observed. Schools that primarily added on career development/planning activities

did so through separate classes or experiences. Their activities tended to be more professionally directed and had varied emphases on authentic learning from class to class. Schools that had primarily integrated career development/planning activities provided the activities or experiences within existing classes. Student activities tended to be self-directed and there was a pervasive, consistent emphasis on authentic learning across classes. Both models incorporated career fairs, job shadowing, and career assessment strategies. The add-on model incorporated a careers class, whereas the integrated model incorporated internships, community service/service learning and advisory activities, and benchmark projects.

Integrated experiences to help students prepare for postschool life included post-graduation plans; personalized learning plans relating school experiences to future goals and dreams; student portfolios and exhibitions; and senior projects to help students develop planning, problem-solving, decision-making, self-regulation, self-assessment, and communication skills. Student advisors or graduation committees that included parents often monitored the planning activities.

At Clarendon Secondary School, post-graduation planning included:

- Development of a post-graduation plan before grade 11 and continual revision and updating of the plan. Each student's plan addresses postschool living arrangements, employment, education and training, and community/citizenship plans.
- Development of student portfolios or exhibitions demonstrating growth in competence and intellectual understanding as a worker, citizen, and learner. Each portfolio includes the student's post-graduation plan, documentation of community service and internship activities, and evidence of practical skills.
- A required service learning program that encompasses supervised and evaluated work experiences and focuses on increasing levels of skill, responsibility and independence, and useful service to others.
- Structured internships of 100 or more hours during the last two years of high school.

The RISER investigators also fielded a student career survey. At least two-thirds of respondents said that they knew what type of job they wanted after finishing all schooling. Students said they knew about the job because they had seen people doing it in person or on TV, someone had told them about it, or they had experience with it through volunteering. Between 39% and 64% of the respondents said that school-related experiences helped them make career decisions; talking with teachers or counselors, classes taken, and community/volunteer experiences were cited most often.

Research Question 5: What contextual factors are required to support and sustain the development of secondary-level learning environments that promote authentic understanding, achievement, and performance for all students?

Dr. Hanley-Maxwell said that school capacity focuses a school's resources on giving all students equal access to high-quality instruction. Research found that specific dimensions of school capacity are demonstrated in the RISER schools in several interrelated ways: teachers' knowledge, skills, and expectations reflect an understanding that all students can do challenging intellectual work; instructional leadership is dispersed in the schools, including from teachers to students; and special educators and general educators co-develop curricula to accommodate a variety of learners.

Structures supporting integrated practices that were identified include: a supportive school climate (e.g., students and staff formed intimate bonds), supportive organizational variables including planning teams, critical friends groups (CFG) of teachers and administrators, and advisory periods. Advi-

sory periods are used to develop a personal connection between students and adults, personalize the educational experience, enable postschool planning, connect community and in-school experiences, and provide a mechanism for academic accountability.

In conclusion, Dr. Hanley-Maxwell cited lessons learned from RISER's SAIL research, including:

- Inclusion can support high academic standards for all students.
- Students without disabilities and students with mild to moderate disabilities exhibit higher performance when provided instruction and assessment tasks of high intellectual quality than under conditions of low authenticity.
- Internal school-wide evaluations and standards using universal design elements can support authentic intellectual work and inclusion.
- External standards appear to have no meaningful influence.
- High stakes external assessments increase the likelihood that students with disabilities are included in relevant instruction, but decrease exposure to authentic pedagogy.
- School-wide commitment to specific academic learning goals and inclusion, and focused and sustained programs to address that commitment appear to be critical to success.
- The models and practices used at the SAIL schools have positive effects on inclusion, authentic intellectual work, and postschool outcomes and planning.

In response to questions, the speakers stated that:

- The schools determined the disability status of students in the study.
- All of the SAIL students had attended standard elementary schools. Some of the students had previously been in inclusive school settings and some had not. Regardless of prior school experience, the SAIL school staff eased students into the expectations of the schools and continually encouraged students to achieve to higher expectations.
- At Clarendon Secondary School and Rothbury High School, committees sustained the reform efforts since they were begun 10-15 years ago. Individuals who were involved in the original planning have been instrumental in sustaining the reform and refer back to the mission statement often. School administration is key to sustaining such efforts.
- Clarendon does not use instructional aides, but the other schools use them across the curriculum. Data on the role of aides would be useful, but was not collected.
- NCLB will likely have a negative impact on highly authentic schools because the school staffs will be pressed to meet standards at the cost of teaching authentically.

Further information can be found on RISER's Website: www.wcer.wisc.edu/riser.

Closing the Performance Gap in Today's High Schools

Jean B. Schumaker, Professor, Departments of Human Development/Special Education; Associate Director, Center for Research on Learning, University of Kansas

Donald D. Deshler, Professor, Department of Special Education; Director, Center for Research on Learning, University of Kansas

Dr. Schumaker and Dr. Deshler discussed the work of the Institute for Academic Access (IAA) at the University of Kansas. The IAA is part of the University's Center for Research on Learning (CRL), which was founded in 1978. CRL's mission is to dramatically improve the performance of

students with disabilities in grades 4-12 and beyond through research-based interventions. IAA's purposes are to create real access to the high school general education curriculum for students with disabilities who can be expected to earn standard high school diplomas and to improve the educational outcomes achieved by students with disabilities. Major IAA goals include:

- to synthesize current knowledge about instructional planning, practices, and materials, and contextual factors;
- to conduct a rigorous research program focused on interventions; and
- to create and operate a national dissemination vehicle that provides information, products, and professional development experiences.

IAA's research teams address planning, materials and assessment, and instructional methods. The target population is high school students who have been formally classified as disabled, are expected to earn standard high school diplomas, and are or have been enrolled in a rigorous general education curriculum—or could be enrolled in such a curriculum if supports were available. The seven stages of research employed by the Institute include:

- determine pressing research needs by working with key stakeholders,
- define research questions with key stakeholders,
- conduct research,
- present research findings to the scientific community,
- produce products and materials for teachers and students,
- create a cadre of professional developers, and
- enhance the capacity of professional developers.

Dr. Schumaker and Dr. Deshler highlighted IAA descriptive research to characterize the general education experience of students with disabilities at urban, suburban, and rural high schools in three states. This four-year study includes four research strands: descriptive research, student-learning research, teacher-learning research, and school-change research. Descriptive research conducted in year one of the study examined four questions:

- What is the school climate for students with disabilities?
- How is instruction provided to students with disabilities enrolled in general education classes?
- What support services are provided to students with disabilities in general education classes?
- What are the outcomes of the instruction and the services?

Classroom observation showed that 60% of the time, general education teachers were engaged in instructional activities; the remaining time was spent on non-instructional activities. Primary teaching methods used by general education teachers included lecture/reading out loud, giving directions, asking questions, monitoring students, and listening. Special education teachers used lecture/reading out loud, listening to students, monitoring students, giving directions, and asking questions.

The researchers also investigated the course options available to students with disabilities. Five types of courses were identified: courses taught by special education teachers for special education students, courses for low achievers and at-risk students, rigorous courses for heterogeneous groups of students, advanced placement courses, and other courses such as vocational-technical electives. A “startlingly low” number of students with disabilities were enrolled in rigorous general education classes. Of 3,220 total possible rigorous class enrollees with disabilities at the study schools, only 682 were enrolled in rigorous courses. General education teachers had low expectations for students

with disabilities, saying they were satisfied if half of the students master half of the content. They believed that students with disabilities fail because of their attitudes and goals, and their skills and abilities. The teachers reported collaborating with special education teachers only 12-24 minutes per week. However, they said they would like to have more professional development on working with at-risk students. The teachers reported major barriers to the success of students with disabilities to be students' attitudes, students' neglect of their work, low ability, poor attendance, and unsupportive parents.

Observation of 285 classes found that general education does not provide accommodations to high school students with disabilities. In the observations, only 10 instances of individual attention and only eight instances of accommodations were seen.

Based on the descriptive research, the researchers concluded that:

- few formal inclusion programs existed at the study schools,
- no comprehensive vision or programs were evident,
- research-based teaching methods were not used,
- there were few real general education enrollments of students with disabilities, and
- the IEP process was largely disconnected from general education programs.

Dr. Schumaker and Dr. Deshler also discussed intervention research conducted by IAA. Based on its research, the Institute has developed the Content Literacy Continuum model to conceptualize the interventions. The continuum includes five levels of intervention:

- Level 1: Ensure mastery of critical content
- Level 2: Weave shared strategies across classes within the general education curriculum
- Level 3: Support mastery of shared strategies by targeted students
- Level 4: Offer more intensive course options for those who need basic skills
- Level 5: Offer more intensive clinical options for those who need foundational language competencies

Most of IAA's work has centered on **LEVEL 1**, developing information teachers can use to alter the ways in which students learn. The "**content enhancement**" approach has been developed to teach academically diverse groups of students. This approach helps to ensure that:

- both group and individual needs are valued and met,
- the integrity of the content is maintained,
- critical features of the content are selected and transformed in a manner that promotes student learning, and
- instruction is delivered in a partnership that actively engages students.

The speakers highlighted research examining selected content enhancement routines. Each routine uses a visual/graphic device that helps students to configure and understand content in a new way. The content enhancement research has involved cooperative development with teachers, ongoing consultations with teachers and experts, validation in controlled experiments, validation of teacher use, collection of student data from intact classrooms, collection of satisfaction data, ongoing cooperative refinement, and translation of the research into practice. Team members work with general education teachers of rigorous courses with inclusive classes to help them design courses using these routines. Evidence suggests that using a combination of devices can increase test scores of students with and without disabilities and that the devices are effective for failing students.

Examples of content enhancement devices include:

- **Cue-Do-Review:** The teacher introduces a Question Exploration Guide (QEG) on a particular topic and explains expectations for student participation and what is important; the teacher and class together construct the device using specified linking steps; and the information presented in the QEG is reviewed and confirmed, and the process of exploring and answering a question is reviewed.
- **Comparison Table:** A graphic device is constructed authentically with students to compare and contrast a concept (e.g., birds and mammals). Research has shown that high achievers, low achievers, and students with disabilities who used comparison tables performed approximately 15% better on a post-test than did a control group of students exposed only to a lecture format.
- **Anchoring Table:** A graphic device is used to help students master a complex concept by relating it to another known concept. Research has found 15% greater gains by students using the concept anchoring table compared to students exposed only to traditional teaching of the concept. Students with disabilities in the experimental group had significant gains.
- **Recall Enhancement:** Memory devices are used for teaching. Research has found little difference in recall in the control and experimental groups when facts were not reviewed. When facts were reviewed, students with and without learning disabilities in the experimental group had greater gains than those of students in the control group.

Dr. Deshler commented that **LEVEL 2** content strategies have been developed to address the needs of students who do not succeed regardless of efforts to intervene and accommodate them in general education classes. These content enhancement strategies include the ASKIT self-questioning strategy to teach reading comprehension. Research shows that seventh grade science students using this strategy have had greater increases in unit test scores than have other students. Additionally, “written expression” strategies have been used in grades 9-11 to prepare students to take a state assessment test. The percentage of students passing the written strategies test component was higher in experimental schools that used written expression strategies in language arts classes.

Targeted students may need **LEVEL 3** interventions, and IAA work has demonstrated the benefit of specific strategies for these students. For example, the DISSECT word identification/recognition strategy helps students to decode difficult words. A study of selected students with learning disabilities who were provided special, intensive instruction using this strategy for 15-40 days showed greater gains than those of students at control schools.

Dr. Deshler said that other research has shown the effectiveness of **LEVEL 4** interventions. For example, researchers in Oregon have found gains among students who were offered corrective reading in intensive, semester-long, or year-long classes. IAA researchers also are studying a model for:

- ensuring access and positive outcomes (e.g., helping students feel included in the classroom),
- looking at the how decisions are made in the IEP process,
- examining the effect of providing homework assistance,
- using benchmark assessments to monitor progress, and
- studying ways to improve the knowledge teachers have about students’ individual needs.

In response to participants' questions, Dr. Schumaker and Dr. Deshler noted that the intervention strategies described have been introduced and studied in many schools over many years. The devices have been incorporated into standard teaching practice at schools, but teachers tend not to develop new devices, in part because they lack the time needed to collaborate on developing devices. In addition, teachers tend to use devices that have value for all students in their classes and to discontinue use of a device if it does not result in gains in subgroups of students.

Reflections on Research in School Reform and Inclusion: Special Education and New Visions of Secondary Education

Russell R. Gersten, Professor Emeritus, College of Education, University of Oregon; Director, Instructional Research Group, Long Beach, California; Director, RMC Research Corporation, California

Dr. Gersten suggested that special education can play a pivotal role in high school reform, just as it has played a role in reform of teaching reading. In the reading field, reform work was initiated by psychologists, but special educators helped to rethink how to help youth with disabilities who have reading difficulties. The special education field is particularly strong in translating psychology and research findings into practice. Instruction ideally should blend real-world and employment applications with core academic instruction so that learning can be applied to real-life situations. Models for this type of instruction now exist and appear to be effective, and could have profound implications for secondary education in general. Strategies for comprehension, studying, writing, and developing persuasive arguments can apply to students with disabilities and to all students in general education.

Inclusion of students with disabilities (e.g., in the RISER SAIL schools) should include meaningful advising of students, relationship building, and teaching students critical job-related skills such as working in groups and locating information. Special education experts can help refine how high school teachers use anchored instruction/activities that require integration and deep processing.

Dr. Gersten also noted roadblocks to research in school reform and inclusion. Despite the vitality, innovation, and the pragmatic nature of today's research, no coherent framework for research currently exists, and different languages are used in research. Dilemmas educators confront include:

- A need for students to build proficiencies *and* learn sophisticated content.
- Psychology research reiterates the importance of fluent reading and fluent ability to recall important arithmetic combinations (e.g., math facts) quickly to build comprehension. However, if the focus shifts to authentic learning or anchored instruction, instructional time committed to fluency in key facts in a particular discipline may diminish.
- Authentic learning is not necessarily intellectually challenging learning. Students with disabilities may be engaged, but their knowledge may be "very thin."
- Co-teaching is often problematic, but no ideal alternative delivery model for special education has been developed. Relying completely on general education teachers is likely to remain problematic.
- It is difficult to conduct rigorous research on subtle variables such as a caring environment in school and active engagement in learning.
- Objective measures of achievement must be relied upon, but these can underestimate students' knowledge in specific content areas.

In closing, Dr. Gersten noted that NCLB and the practice of grade level retention of students with disabilities may increase the number of special education students in high schools.

Presenter Biographies

Lynne Anderson-Inman, Ph.D. is Director of the Center for Advanced Technology in Education and the Center for Electronic Studying, both in the College of Education, University of Oregon. She is a nationally and internationally recognized expert on the use of technology to improve reading, writing, and studying, with special emphasis on strategies for using technology to enhance the academic success of struggling learners. Dr. Anderson-Inman has pioneered the concept of “computer-supported studying”, conducting research and developing materials on strategies designed to promote effective learning through the use of technology. She has directed numerous federally-funded projects investigating (1) computer-based study strategies for diverse learners, (2) digital books with “supported text”, (3) networked note-taking for ESL students, and (4) large-scale Web-based environments designed to promote extended study and authentic inquiry. Dr. Anderson-Inman is a widely published author and a frequent speaker at national and international conferences.

Fabricio E. Balcazar, Ph.D. is Associate Professor in the Department of Disability and Human Development at the College of Applied Health Sciences and the Department of Psychology, University of Illinois, Chicago. For the past 20 years, Dr. Balcazar has conducted research on the development of systematic approaches for promoting the empowerment of minorities and underserved populations, including individuals with disabilities and their families. His research has included the development and evaluation of methods for promoting empowerment approaches to vocational rehabilitation service delivery, transition, dropout prevention, and attainment of rehabilitation goals. Dr. Balcazar currently directs projects (in collaboration with members of his research team) aimed at testing a model to support minority youth with high incidence disabilities graduating from high school in their pursuit of adult education training in the City Colleges of Chicago.

Michael R. Benz, Ph.D. is Professor of special education at the University of Oregon. His interests include identifying factors associated with secondary and postschool success for youth and young adults with disabilities and examining the impact of integrated academic/occupational curricula and related work-based learning experiences for high school students. In addition, Dr. Benz works with state departments, secondary schools, and postsecondary institutions to develop, implement, and sustain evidence-based transition practices and programs. Previously, he was a high school social studies and special education teacher.

Brian A. Bottge, Ph.D. is Assistant Professor in the Department of Rehabilitation Psychology and Special Education at the University of Wisconsin-Madison. His research focuses on the use of contextualized instruction to improve the math performance of students with learning and emotional disabilities. Previously, he taught students with and without disabilities in grades 5-12 for 15 years and coordinated a district-wide assessment and evaluation program for 10 years.

Jeffery P. Braden, Ph.D. is Professor of Educational Psychology and Director of the School Psychology Program, University of Wisconsin-Madison. He holds graduate degrees from the University of California, Berkeley; Gallaudet University; and Beloit College. Dr. Braden has presented more than 120 papers at state, national, and international meetings and has published more than 150 articles, books, book chapters, and other products on assessment, school psychology, intelligence, and deafness. His current funded research includes an Internet-based hypermedia course, “Assessing One and All” (distributed by the Council for Exceptional Children), the Research Institute for Sec-

ondary Education Reform (RISER) for youth with disabilities, a study of the treatment utility of assessment for educational consultation, and international research as a Fulbright Scholar on high stakes testing in Greece. Dr. Braden has developed a large-scale problem-solving program to prevent academic failure with inner-city urban youth in Chicago Public Schools, and consulted with performance assessment research funded by the federal government. He continues to provide in-service training for educators on educational accountability programs (No Child Left Untested!) and inclusion of students with disabilities in these programs throughout the U.S.; his efforts earned him the 2001 Distinguished Faculty Teaching Award for outreach teaching from UW-Madison.

Brian Cobb, Ph.D. is Professor in the School of Education at Colorado State University and Co-Director of the Research and Development Center for the Advancement of Student Learning, a community research collaborative between Colorado State University and the local school district. He is Principal Investigator of “What Works in Transition,” an OSEP-funded, evidence-based research synthesis grant. He also directs a variety of OSEP, NSF, and foundation funded research, assessment, program evaluation, and meta-evaluation grants across the K-16 educational spectrum.

Donald D. Deshler, Ph.D. is Professor of Special Education and Director of the Center for Research on Learning (CRL) at the University of Kansas. Dr. Deshler (in conjunction with other CRL staff) has developed and validated the Strategic Instruction Model and the Learning Strategies Curriculum as mechanisms for improving the learning effectiveness of at-risk students (including those with learning disabilities) and the instructional effectiveness of teachers. He is the author of the textbook *Teaching Adolescents with Learning Disabilities: Strategies and Methods*. Dr. Deshler was the original editor of the Council for Learning Disabilities’ journal, *Learning Disability Quarterly*, and is currently on the editorial boards of several other journals in learning disabilities and special education. He is the recipient of the J. E. Wallin Distinguished Service Award from the Council for Exceptional Children and the Louise Byrd Outstanding Graduate Educator of the Year Award and the Higuchi Research Achievement Award from the University of Kansas, and has been awarded the Learning Disabilities Association of America Award for outstanding service to the field of learning disabilities.

Albert J. Duchnowski, Ph.D. is Professor of Child and Family Studies and Special Education at the University of South Florida. He is also Deputy Director of the Research and Training Center for Children’s Mental Health at the Louis de la Parte Florida Mental Health Institute. Dr. Duchnowski’s current work focuses on examining school reform and developing school-based services for children who have challenging behavior. He has been Principal Investigator on several grants focusing on children with disabilities and training professionals from a multi-disciplinary perspective to work with these children and their families. Dr. Duchnowski has numerous publications and has co-edited three books on children’s mental health services and special education. In addition to academic experience, he was Director of Pupil Personnel Services and Special Education for 11 years in Gettysburg, Pennsylvania. Dr. Duchnowski has also been a consultant to state directors of special education and children’s mental health in 30 states on collaborative, community-based systems of care for children with disabilities and their families. He received his doctorate in clinical child psychology from Vanderbilt University with a minor concentration in Special Education at Peabody College.

Russell Gersten, Ph.D. is Professor in the College of Education at the University of Oregon, Director of the Instructional Research Group in Long Beach, California, and Director of the California office of the RMC Research Corporation. He has directed or co-directed 40 applied research grants on the education of students considered at risk for school failure and the process of translating research into classroom practice. Dr. Gersten is a nationally recognized expert in both quantitative and

qualitative research and evaluation methodologies and has consulted at universities throughout the U.S. He has also served on numerous national panels on research methodology and issues related to translating research into classroom practice. Dr. Gersten has over 100 publications in journals such as *Review of Educational Research*, the *American Education Research Journal*, and *Exceptional Children*, and currently serves on the editorial board of eleven major journals. He served as President of CEC's Division for Research in 1997-98 and received the 2002 AERA Distinguished Special Education Research Award.

Cheryl Hanley-Maxwell, Ph.D. has been involved in creating and expanding school opportunities and work systems for youth and adults with disabilities for many years; first as a practitioner and then as a researcher and trainer. Her work has included direct service as a teacher, educational coordinator, and job coach; pre-service and in-service training for transdisciplinary teams (special educators, administrators, and rehabilitation professionals); consultation to school districts and rehabilitation service providers; and research related to curriculum, family involvement, employment issues, secondary special education, and collaboration. Most recently she has been Co-Director for the Research Institute on Secondary Education Reform for youth with disabilities. She is also Professor of Rehabilitation Psychology and Special Education at the University of Wisconsin-Madison.

Deborah M. Harris, Ph.D. is Research Associate Professor at the Center for Research on Children's Development and Learning at the University of South Florida in Tampa. Her research focuses on general and special education collaboration and inclusive education. In partnership with the Hillsborough County Schools, Dr. Harris developed FUSE, a co-teaching model of service delivery. Dr. Harris taught children and youth with special needs for 10 years and has taught at the university level for 16 years. Prior to joining the faculty at USF, Dr. Harris was on the faculty of the University of North Carolina at Greensboro. At both universities, Dr. Harris has received numerous accolades for teaching, including both universities' top awards for teaching excellence. Dr. Harris received her undergraduate degree from Bennett College in Greensboro, N. C. and earned both her Masters and Ph.D. from the University of North Carolina at Chapel Hill. She served as a post-doctoral fellow with the Bush Institute for Child and Family Policy and a research fellow at the Free University of Amsterdam in Holland, and completed a research internship at the University of Kansas.

M. Bruce King, Ph.D. is Research Scientist with the Wisconsin Center for Educational Research, University of Wisconsin-Madison, and Principal Investigator for the Research Institute on Secondary Education and Reform for Students with Disabilities (RISER). His research for RISER focuses on features of instruction, assessment, and support strategies that promote authentic understanding, achievement, and performance for all students. Previously, Dr. King worked with the Center on Organization and Restructuring of Schools at UW-Madison and its five-year School Restructuring Study. His research concentrated on organizational aspects of restructuring—including school governance, systems of accountability, and teacher professional community—that contributed to authentic pedagogy and achievement. Dr. King has published in leading educational journals and has consulted with schools and other research projects in the U.S. and Australia. He was a classroom teacher for eleven years and received his Ph.D. from UW-Madison in curriculum and instruction.

Krista Kutash, Ph.D. is Associate Professor and Deputy Director of the Research and Training Center for Children's Mental Health at the University of South Florida in Tampa. Previously, she worked as a social worker. Her doctorate is in Educational Measurement and Research, and she also holds an M.B.A. with a specialty in economics. Dr. Kutash has been with the Center since 1984 and has played a key role in developing the Center's research agenda as well as serving as a consultant

and trainer across the country. She has been Principal Investigator on several grants examining issues related to children with disabilities and their families. Among her extensive publications is a comprehensive review of the empirical base of the system of care for children with emotional and behavioral disabilities and their families (Kutash & Rivera, 1996) as well as over 100 publications and presentations on improving the outcomes for children. Dr. Kutash holds a joint appointment in the Department of Special Education where she trains doctoral students in program evaluation.

B. Keith Lenz, Ph.D. is Senior Research Scientist at the Center for Research on Learning and Associate Professor in the Department of Special Education at the University of Kansas. He received his Ph.D. from the University of Kansas in special education. Dr. Lenz is also Director of the Smart-together Network of Strategic Learning Centers. His research and writing focus on adolescent and adult literacy, including program reform and development. Dr. Lenz has served as Principal Investigator and/or Project Director for a variety of privately- and federally-funded projects designed to address the success of students with disabilities and other youth considered at risk for school failure. Dr. Lenz's research has focused on the development of teaching and planning routines for inclusive teaching in core curriculum content areas, as well as the development of learning and social skill strategies. He has also focused on adult literacy programs, strategic tutoring, teacher-student communication systems, secondary program development, online course development, applications of technology to increase student learning, teacher education reform, and promoting school-wide change to increase the learning of youth with special needs. He is the author of more than 50 books, chapters, and refereed journal articles.

Kofi Marfo, Ph.D. is Professor of Educational Psychology and Director of the Center for Research on Children's Development and Learning at the University of South Florida's College of Education. His research and scholarship examine the following topics: early intervention efficacy; parent-child interaction and the development of children with disabilities; cognitive strategies and instructional design; evaluation of innovative educational programs; and critical analysis of behavioral science and education inquiry. Dr. Marfo's current work focuses on rethinking school readiness to include an emphasis on the promotion of developmental processes in the earliest years of life (i.e., birth to 3). He is a 2003 recipient of the Irving B. Harris Mid-Career Fellowship awarded by Zero to Three. Dr. Marfo is editor/co-editor of five volumes and has published over 50 articles and chapters. His work has been cited in 77 journals and over 30 reference books spanning many different disciplines. Dr. Marfo has given keynote address in Australia, Canada, Germany, and New Zealand.

Jean B. Schumaker, Ph.D. is Associate Director of the Center for Research on Learning and Professor in the Departments of Human Development and Special Education, University of Kansas. She has spent the last 25 years studying the problems of adolescents and developing educational interventions for them. Along with Dr. Donald Deshler and other colleagues at the Center for Research on Learning, she has developed the *Strategies Intervention Model*, a comprehensive program for students with learning disabilities. One line of programmatic research that Dr. Schumaker has pursued since 1972 concerns social skills performance and instruction. Her research studies in this area have described the social skills of several populations of at-risk youth and have reported the development and validation of instructional procedures for social skills. Her current work in this area focuses on the instructional procedures for social skills in inclusive classrooms in which students with disabilities are enrolled. Dr. Schumaker is an author of the Learning Strategies Curriculum, comprised of fifteen teachers' manuals for teaching students learning strategies; Social Skills for Daily Living, ASSET, and the Cooperative Strategies Series, three social skills curricula; eight manuals in the Content Enhancement Series, a series developed to improve the delivery of content in main-

stream classrooms; and numerous articles and book chapters. She is devoted to the translation of research into practice and has created with her colleagues a network of 1300 certified professionals throughout the U.S. and other nations who are associated with the Center and who train teachers to use the methods developed at the Center. Dr. Schumaker was the President of the Division for Learning Disabilities of the Council for Exceptional Children during 1999-00. In 1996, she received the Division's award for outstanding contributions to the field of learning disabilities. She received her Ph.D. from the University of Kansas in Developmental and Child Psychology in 1976.

Teri Wallace, Ph.D. is Research Associate at the University of Minnesota's Institute on Community Integration. Her research interests include examining the impact of inclusive high school environments on student engagement, identifying factors associated with preparing and supervising paraprofessionals to successfully support students, and utilizing technology, data based decision-making models, and continuous improvement processes to promote whole school reform. Dr. Wallace regularly teaches in the Department of Educational Psychology and works at a state and national level to promote the preparation of paraprofessionals.

Valli Davis Warren, M.S. is Project Coordinator and Assistant Researcher for RISER at the Wisconsin Center for Education Research (WCER), where she investigates the organizational factors of school capacity that support and sustain secondary learning environments and, in turn, promote authentic understanding, achievement, and performance for students with and without disabilities. Previous work experience relevant to this position includes being a Project Assistant with the Center on Organization and Restructuring of Schools, a school administrator, and a teacher of students with disabilities. Her undergraduate work was completed at The Ohio State University, and she received her master's degree from the University of Wisconsin-Eau Claire.

Naomi Zigmond, Ph.D. is Professor of Special Education in the Department of Instruction and Learning, School of Education, University of Pittsburgh. She received her Ph.D. from Northwestern University in 1966, majoring in language pathology and learning disabilities. Since then, she has held a number of clinical, academic, and administrative positions at the Massachusetts General Hospital, Boston University, and the University of Pittsburgh. Dr. Zigmond has been an active special education researcher and teacher for more than a quarter century. For the past several years, she led a team of researchers and practitioners in the development of the statewide alternate assessment for students with significant disabilities. She is also responsible for directing the evaluation of the Pennsylvania Reading First initiative. In addition, Dr. Zigmond is actively involved in a research study of the effectiveness of co-teaching as a special education service delivery model in secondary schools. She has published more than 75 articles in referred journals, 20 book chapters, and 5 books, and spent 5 years as Editor of *Exceptional Children*. In 1997, Dr. Zigmond received the Research Award from the Council for Exceptional Children in recognition of research that has contributed significantly to the body of knowledge about the education of exceptional children and youth.

This report was supported in whole or in part by the U. S. Department of Education, Office of Special Education Programs, (Cooperative Agreement No. H326J000005). However, the opinions expressed herein do not necessarily reflect the policy or position of the U. S. Department of Education, Office of Special Education Programs, and no official endorsement by the Department should be inferred.

Note: There are no copyright restrictions on this document; however, please credit the source and support of federal funds when copying all or part of this material. This report is also available on the Web for printing at: <http://ici.umn.edu/nset/>.

