

The Institute for Academic Access, University of Kansas, and the
National Center on Secondary Education and Transition, University of Minnesota

present a Capacity Building Institute on

Improving Academic Performance and Access to the General Curriculum for Secondary Youth with Disabilities

July 13, 2004
Wyndham Hotel
Washington, DC



Institute Proceedings

Background	<i>page 2</i>
Agenda	<i>page 3</i>
Summary	<i>page 5</i>
Discussion Questions	<i>page 16</i>
Presenter Biographies	<i>page 17</i>

Background

On July 13, 2004, the Institute for Academic Access at the University of Kansas and the National Center on Secondary Education and Transition at the University of Minnesota co-sponsored a Capacity Building Institute on *Improving Academic Performance and Access to the General Curriculum for Secondary Youth with Disabilities* to present some of the latest developments in the field of secondary education and transition. The day included practical strategies and reflective dialogue around:

- Research results related to improving academic performance of and access to the general curriculum for youth with disabilities;
- Methodological issues in research related to academic performance of and access to the general curriculum for secondary youth with disabilities; and
- Research-based interventions that improve academic performance and increase access to the general curriculum.

Our intention for the workshop was to provide participants with practical, useful information that had meaningful application to their 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, <i>Director, National Center on Secondary Education and Transition, University of Minnesota-Twin Cities, Minneapolis, MN</i> B. Keith Lenz, <i>Moderator; Associate Professor, Department of Special Education, University of Kansas, Lawrence, KS; Senior Research Scientist, Center for Research on Learning</i>
8:45	Opening Remarks	Louis Danielson, <i>Director, Research to Practice Division, Office of Special Education Programs, U.S. Department of Education, Washington, DC</i>
9:00	National Longitudinal Transition Study-2	Lynn Newman, <i>Co-Director, National Longitudinal Study-2, SRI International, Menlo Park, CA</i>
10:15	<i>BREAK</i>	
10:45	Institute for Academic Access	Donald D. Deshler, <i>Professor, Department of Special Education, University of Kansas, Lawrence, KS; Director, Center for Research on Learning, University of Kansas</i> Jean B. Schumaker, <i>Professor, Departments of Human Development/ Special Education, University of Kansas, Lawrence, KS; Associate Director, Center for Research on Learning, University of Kansas</i>
12:00	<i>LUNCH</i>	
1:00	Featured Researchers	Lynne Anderson-Inman, <i>Director, Center for Advanced Technology in Education/Center for Electronic Studying, College of Education, University of Oregon, Eugene, OR</i> Fabricio Balcazar, <i>Associate Professor, Departments of Disability and Human Development/Psychology, University of Illinois, Chicago, IL</i> Janis Bulgren, <i>Associate Research Scientist, Center for Research on Learning, University of Kansas, Lawrence, KS</i> Michael Bullis, <i>Professor, Department of Special Education, University of Oregon, Eugene, OR</i> Catherine Cobb Morocco, <i>Senior Scientist, Associate Director, Center for Family, School and Community Education Development Center, Inc., Newton, MA</i> Betsy Davis, <i>Research Scientist, Oregon Research Institute, Eugene, OR</i> James Frasier, <i>Research Scientist, Center for Education and Work, University of Wisconsin, Madison, WI</i>

Improving Academic Performance and Access to the General Education Curriculum for Secondary Youth with Disabilities

		<p>Michael Hock, <i>Assistant Director for the Center for Research on Learning; Director of the Athletic Department's academic support program, University of Kansas, Lawrence, KS</i></p> <p>Margo Izzo, <i>Program Manager for the Special Education and Transition Services at the Nisonger Center, Ohio State University, Columbus, OH</i></p> <p>Larry Korterling, <i>Professor of Special Education, Appalachian State University, Boone, NC</i></p> <p>Krista Kutash, <i>Associate Professor/Deputy Director, Research and Training Center for Children's Mental Health, University of South Florida, Tampa, FL</i></p> <p>B. Keith Lenz, <i>Associate Professor, Department of Special Education, University of Kansas; Senior Research Scientist, Center for Research on Learning, University of Kansas, Lawrence, KS</i></p> <p>Margo Mastropieri, <i>Professor, Graduate School of Education, George Mason University, Fairfax, VA</i></p> <p>Jean Ness, <i>Project Director, Institute on Community Integration, University of Minnesota, Minneapolis, MN</i></p> <p>Robert Stodden, <i>Director, Center on Disability Studies; Professor of Special Education, University of Hawaii-Manoa, Honolulu, HI</i></p> <p>Gerald Tindal, <i>Professor, Director of Behavioral Research and Teaching; Area Head of Educational Leadership, University of Oregon, Eugene, OR</i></p> <p>Teri Wallace, <i>Research Associate, Institute on Community Integration, University of Minnesota-Twin Cities, Minneapolis, MN</i></p> <p>Naomi Zigmond, <i>Professor, Department of Instruction and Learning, University of Pittsburgh, Pittsburgh, PA</i></p>
2:30	BREAK	
3:00	Featured Researchers and Facilitated Discussions (con't)	
4:15	BREAK	
4:30	Future Challenges in Secondary Education for Youth with Disabilities	<p>Naomi Zigmond, <i>Professor, Department of Instruction and Learning, University of Pittsburgh, Pittsburgh, PA</i></p>

Summary

Overview

The Capacity Building Institute (CBI) on *Improving Academic Performance and Access to the General Curriculum for Secondary Youth with Disabilities* brought together researchers, practitioners, policymakers, and advocates to discuss research results, methodological issues, and research-based interventions related to improving academic performance of and access to the general curriculum for youth with disabilities. Co-sponsored by the National Center on Secondary Education and Transition (NCSET) at the University of Minnesota and the Institute for Academic Access at the University of Kansas, the CBI's intent was to provide participants with practical, useful information that would have meaningful application in their daily work.

The CBI opened with remarks from Dr. Louis Danielson, director of the Research to Practice Division of the Office of Special Education Programs (OSEP), U.S. Department of Education. Dr. Lynn Newman, co-director of the National Longitudinal Transition Study-2 (NLTS2) then presented findings from Wave 1 of the study, and Dr. Jean B. Schumaker and Dr. Donald Deshler of the Center for Research on Learning at the University of Kansas discussed the work of the Institute for Academic Access as it relates to improving academic performance and access to the general curriculum for youth with disabilities.

Following the plenary presentations, the CBI participants met in six small groups to hear presentations by 18 nationally-known featured researchers. The small groups then reflected on the implications of existing research results and discussed research needs and barriers. Dr. Naomi Zigmond of the University of Pittsburgh concluded the day by presenting her insights and thoughts about future challenges facing the secondary education of youth with disabilities.

Welcome and Agenda Review

Dr. Johnson welcomed the CBI participants and explained that NCSET was funded in the year 2000 by the U.S. Department of Education. NCSET coordinates national resources, offers technical assistance, and disseminates information related to secondary education and transition for youth with disabilities in order to create opportunities for youth to achieve successful futures. The CBI was one of a series of NCSET events that have included the National Leadership Summit on Improving Results for Youth, held in September 2003 in Washington, DC. A second National Leadership Summit scheduled for June 2005 will again bring together teams from each state and territory. NCSET also disseminates information through its Web site (www.ncset.org), which receives approximately 10,000 hits a day.

The purpose of each CBI is to organize researchers around a key theme to share the best of research in special education and related fields. This CBI was designed to discuss research results, methodological issues, and research-based interventions to improve academic performance of and access to the general curriculum for secondary school youth with disabilities. The CBI was co-sponsored with the Institute for Academic Access at the University of Kansas.

Dr. Johnson thanked the CBI speakers, including Dr. Lynn Newman of SRI International, Dr. Jean Schumaker and Dr. Donald Deshler of the University of Kansas, Dr. Naomi Zigmond of the University of Pittsburgh, and the featured researchers. He also thanked the planning committee, including Donna Johnson of NCSET, Dr. Jean Schumaker, and Dr. Bonnie Jones of OSEP.

Dr. B. Keith Lenz, Senior Research Scientist, Center for Research on Learning, and Associate Professor, Department of Special Education, University of Kansas, Lawrence, Kansas

Dr. Lenz, the CBI moderator, outlined the day's agenda and introduced the first speaker, Dr. Louis Danielson, who has been with the U.S. Department of Education for more than 20 years.

Opening Remarks

Dr. Louis Danielson, Director, Research to Practice Division, Office of Special Education Program (OSEP), U.S. Department of Education, Washington, DC

Dr. Danielson began his remarks by describing OSEP's National Activities Improvement Paradigm, which includes technical assistance (TA) and dissemination, technology, parent information, State Improvement Grants, studies and evaluation, research and development, and professional development. This paradigm represents an investment in knowledge development, scaling up of research, support of parents, and evaluation of the overall impact of investments made (e.g., through the National Longitudinal Study Transition Study-2).

The No Child Left Behind Act (NCLB) is a landmark piece of legislation and is the first since the Individuals with Disabilities Education Act (IDEA) that is not a disability law, but has a strong disability focus, Dr. Danielson said. To demonstrate NCLB's value, models and positive success stories are needed, and it is important to continue working toward research-based practice and providing TA for both general and special education. One of OSEP's roles is to work with schools and states toward this goal.

General education teachers who have been surveyed report the need for additional training and support to work with students who have diverse learning needs. It is also known that students with disabilities need access to high-quality instruction to make progress. This access can be realized through the availability of highly qualified and effective teachers, the use of evidence-based practices, and alignment of assessments with instruction, curriculum, and standards—an area in which OSEP is making substantial investments.

Dr. Danielson highlighted research findings regarding academic performance and access to the general curriculum for secondary school youth with disabilities. For example:

- *Graduation rates:* When the Government Performance and Results Act (GPRA) was passed in 1993, OSEP identified graduation rates as a performance indicator. Between the 1995-96 and 2001-02 school years, the rate of youth with disabilities graduating from high school with a standard diploma rose from 42 percent to more than 51 percent. Despite the progress that has been made, this figure remains too low. For some populations (e.g., students with emotional disabilities), the dropout rate also is very high. To address this problem, OSEP established a dropout TA center in January 2004.
- *Academic course taking:* Many of the 1997 amendments to IDEA were designed to address the issue of academic course taking. Data from the National Longitudinal Transition Study (NLTS) and NLTS2 show that between 1993 and 2003, there was a dramatic increase in the proportion of students with disabilities who take challenging courses that are often associated with preparation for postsecondary education.
- *Vocational course taking:* NLTS demonstrated the powerful role of vocational education in helping youth with disabilities to stay in school and achieve positive postschool outcomes. Nearly two-thirds of youth with disabilities are enrolled in at least one vocational course. However, since NLTS was conducted, participation in vocational courses has declined markedly while participation in academic courses has increased. It is not clear whether this shift is beneficial in terms of postschool outcomes.

Improving Academic Performance and Access to the General Education Curriculum for Secondary Youth with Disabilities

- *Literacy:* NLTS2 found that most students with disabilities make at least adequate progress, as reported by teacher grades. However, teacher grades may not accurately reflect how well students are doing in school. When standardized test performance was compared with students' actual grades, students with disabilities were found to be an average of 3.6 years behind grade-level performance in both reading and math.
- *Employment:* Many students with disabilities do not consider themselves to be disabled after they leave school. The Bureau of Labor Statistics reports much lower employment rates for persons with disabilities than do NLTS2 data.
- *Self-determination:* More focus and more research-based practices are needed in this area.

Dr. Danielson concluded his remarks by listing challenges facing schools. These challenges include:

- Ensuring access to the general curriculum;
- Increasing high school graduation rates;
- Ensuring preparation for postsecondary education and employment;
- Increasing informed parent involvement in education planning, life planning, and decision making;
- Promoting students' self-determination and advocacy;
- Improving collaboration and links with systems at all levels;
- Ensuring a qualified workforce in schools and agencies; and
- Collecting and use of postschool outcome data for program improvement.

Findings from the National Longitudinal Transition Study-2

Dr. Lynn Newman, Co-Director, National Longitudinal Transition Study-2, SRI International, Menlo Park, California

Dr. Newman began by saying that thinking about access and inclusion has changed tremendously over time. In the 1980s, the focus was on *where* students would receive their education (e.g., general education versus special education settings), but little thought was given to *what* was happening in those classrooms. The focus of NLTS2 moved beyond studying classroom access to studying curriculum access and how the experiences of students in special education compare to those of students in general education.

Now in Year 4 of the 10 years, NLTS2 is also collecting more information about every aspect of students' lives. For example, it is gathering data about students' experiences both within and outside of schools (e.g., data about friendships and employment) and is following students until they become young adults. NLTS2 began in the 2000-01 school year. Students' ages at the beginning of the study spanned from 13 to 16 years, and the researchers are following them for nine years. The study includes more than 11,000 students, and the findings generalize to all special education students who are in the NLTS2 age range, to each of the 12 special education disability categories, and to each single-year age cohort. The study is designed to gather information from multiple perspectives, including parents, students, teachers, and school transcripts.

Dr. Newman then presented findings from NLTS2 Wave 1 (2001-02 school year) School Program Study and General Education Teacher Survey. NLTS comparisons presented below are from school record abstracts for 1985-86 and 1986-87. She highlighted the following findings:

Academic course taking:

- Academic courses account for most of the course loads of the students with disabilities. A large majority of

Improving Academic Performance and Access to the General Education Curriculum for Secondary Youth with Disabilities

these students take language arts, math, social studies, and science courses. This generally mirrors academic courses taken by general education students, except that general education students are more likely to take foreign language courses (50% of general students compared to 21% of students with disabilities).

- Since NLTS, there has been a marked increase in the proportion of students with disabilities who take science, fine arts/performing arts, foreign language, social studies, and math courses, and a decrease in students who take vocational education courses.

Instructional settings of students with disabilities:

- Most students with disabilities take courses in general education settings (88%) and special education settings (70%). More than one-fourth of the students are fully included, taking all general education courses in a general education academic setting—a figure that is much higher than that found in the first NLTS.
- Sixty-nine percent of students take academic courses in general education settings.
- An average of 60% of students' course loads are taken in a general education setting.
- Students with speech impairments take an average of 76% of their courses in general education classes. This compares to 24% of those with multiple disabilities, 26% of those who are deaf/blind, 31% of those with mental retardation, and 33% of those who have autism.
- Compared to NLTS student participants, NLTS2 Wave 1 student participants are more likely to take academic courses in general education settings and less likely to take academic courses in special education settings.

General education academic classroom context:

- Students with disabilities take classes very much like those taken by other students and are not tracked into lower performing classes, according to teacher reports of the performance level of classes of students with disabilities by subject areas.
- Among the disability categories, students with visual impairments are most likely to be in advanced placement/honors courses. Those with traumatic brain injury, mental retardation, or multiple disabilities are most likely to be in below-grade-level classes.
- On average, general education academic and special education class sizes were about the same (24 and 20 students, respectively).
- Special education classrooms are more likely to have aides, one-to-one instructional assistants, specialists, and adult volunteers in the classroom than are general education classrooms. General education classes have a 21 to 1 student-teacher ratio, compared to 6 to 1 for special education classes.
- Eighty-eight percent of students with disabilities have general education teachers who are white, and 96% of students with disabilities have teachers who are credentialed to teach their classes.
- Ninety-five percent of general education academic teachers of students with disabilities feel they have some support. Sixty-one percent said they receive information about student needs or abilities, and 51% said they receive consultation services by special education staff.
- Ninety-three percent of students with disabilities enter general education classes with supports and accommodations to help them achieve. Seventy-five percent of the students receive more time in taking tests, and 66% of the students have additional time to complete assignments.
- Students with disabilities also receive learning supports, including monitoring of progress by a special education teacher (60%) and more frequent feedback (35%).

Improving Academic Performance and Access to the General Education Curriculum for Secondary Youth with Disabilities

Classroom instructional practices in general education academic classes:

- Fifty-two percent of students with disabilities in general education academic classes receive some curriculum modification, 35% receive unmodified curricula, and 11% receive substantially modified curricula.
- Students in math classes are least likely and those in science classes most likely to have a modified curriculum.
- Students with speech impairments and hearing impairments are most likely to have an unmodified curriculum.
- Students with and without disabilities in general education academic classes generally receive the same type of discipline. Those with autism and multiple disabilities are least likely to receive the same type of discipline as their peers.
- Most general education academic classes enrolling students with disabilities use whole-class instruction rather than small-group instruction. Students with disabilities receive very little individual instruction from teachers, but are more likely than others to receive individual instruction from another adult.
- Students with disabilities and other students are nearly equally likely to be in general education academic classes that use textbooks, worksheets, and workbooks.
- Computers are “rarely or never” or only “sometimes” used by students with disabilities and other students in general education academic classes.
- For both students with disabilities and other students, very few general education academic classes do instructional activities outside the classroom (e.g., school-based field trips and community-based instruction/experience).

Students' classroom participation:

- Students with disabilities are not passive recipients of their education. However, they are less likely than their non-disabled peers to participate in class. For example, students with disabilities in general education academic classes are half as likely as their peers to respond frequently to questions, and half of students with disabilities rarely or never present to a class or group.
- Students with disabilities are less likely to participate in discussions in general education academic classes than in vocational education and special education classes.

Teachers' perceptions and expectations of students' performance:

- Teachers report that only 8% of students are inappropriately placed and 66% of students are appropriately placed in general education academic classrooms.
- Ninety-seven percent of students with disabilities are expected to keep up with other students in general education academic classes, but only 71% do keep up. The rate of keeping up differs by disability category, with the greatest gap for those with mental retardation, other health impairment, and emotional disturbance.

The NLTS2 researchers also examined the relationship between spending more time in regular education classes and students' engagement in school, academic performance, and social adjustment. They performed multivariate analyses to look at relationships independently and to control for variables of disability/functioning, individual and household characteristics, parent support, and school program/performance. Students were found to have both positive and negative associations with spending more time in a general education classroom. More time spent in general education classrooms was associated with lower grades (NLTS found these students are most likely to drop out), but fewer days absent per year, stronger math and reading abilities, lower rates of disciplinary action at school, and higher rates of school or community group membership.

Improving Academic Performance and Access to the General Education Curriculum for Secondary Youth with Disabilities

Dr. Newman concluded that the Wave 1 NLTS2 results suggest that:

- Students with disabilities are more likely to have school programs that emphasize academics and participation in general education classes than they did in the past.
- Youth with disabilities in general education academic classes are likely to be in grade-level classes and in larger classes with less access to adult help.
- Youth with disabilities in general education academic classes are likely to have teachers who receive support for serving students with disabilities; to receive a variety of accommodations, modifications, and supports; and to have at least some modifications to their curricula.
- Many teacher-driven activities in general education academic classes are experienced equally by students with disabilities and by the class as a whole.
- Students with disabilities consistently participate less actively than their classmates in general education academic classes.
- Youth with disabilities in general education academic classes are likely to have teachers who consider the students' placement in class to be at least somewhat appropriate and to expect them to keep up with other students in the class.

In response to questions from the CBI participants, Dr. Newman said that:

- Students' parents had three opportunities to sign and return informed consent forms. If they did not respond to the third request, a "passive consent form" was sent to tell parents that their children would be included if no response was received.
- Reliability of responses to the NLTS2 questions was verified through pretesting. Validated questions from other national surveys with the general population and from the first NLTS were also used.
- NLTS2 gathered data about family income and ethnicity. African-American students are less likely to be enrolled in general education courses, and students who are wealthier are more likely to be enrolled in general education courses.
- NLTS2 included students in special education schools and sampled from school district rosters, but did not select specifically for students in alternative schools.
- Comparing student transcripts across schools is challenging. Schools were asked to annotate transcripts to indicate whether students are in special education, general education, or vocational education.

The NLTS2 Web site (www.nlts2.org) offers more information about the study and offers data in a searchable format.

Institute for Academic Access

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

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

Dr. Schumaker said that IAA's purposes are to create real access to the high school general education curriculum for students with disabilities and to improve educational outcomes achieved by those students. When IAA was established, the research partners included a planning team, an instructional methods team, and a materials and

assessment team. The target population for IAA's work is high school students with disabilities who have been formally classified as disabled, who are expected to earn standard high school diplomas, who are or have been enrolled in a rigorous general education curriculum, or who could be enrolled in such a curriculum if support were available. Four strands of research conducted were: descriptive research on contextual factors; student-learning research; teacher-learning research; and school-change research.

The performance gap of students with disabilities is a concern, Dr. Schumaker said. IAA researchers have observed general education classrooms to find out what was happening in them and what techniques teachers were using. They learned that much of the time was spent in non-instructional time. In general education, 51% of time was spent in lecture/reading to students and 22% was spent giving directions. In special education, 51% of classroom time was spent in lecture/reading to students, 14% was spent giving directions, and 44% was spent listening. Activities helpful to students with disabilities were not frequently observed.

The researchers also asked schools about course options for students with disabilities (i.e., courses taught by special education teachers for special education students, courses taught by general education teachers for low achievers and at-risk students, rigorous courses taught by general education teachers with heterogeneous groups of students, advanced placement courses taught by general education teachers, and other courses taught by general education teachers). They found that rigorous general education enrollment for students with disabilities was far less than possible enrollments (682 out of 3,220 possible enrollments) and that 44% of students with disabilities had C averages.

Dr. Deshler then described a model for ensuring access and positive outcomes for students. This model includes:

- Program planning—a program rubric and intervention mosaic;
- Program components—homework assistance, learner-friendly courses, and skills and strategies instruction feeding into the individual education plan (IEP) process;
- Formative evaluation tools—student progress measures and benchmark assessments; and
- Final outcomes—success in rigorous courses, high school graduation, passing scores on state assessments, and enrollment in postsecondary education.

The Content Literacy Continuum (CLC), which is based on the concept of whole-school reform, dovetails with the above model. The CLC model includes five levels:

- Level 1: Enhanced content instruction;
- Level 2: Embedded strategy instruction;
- Level 3: Intensive strategy instruction;
- Level 4: Intensive basic skill instruction; and
- Level 5: Therapeutic intervention for students with severe language problems.

The continuum also includes strategic tutoring before or after school, extending the instruction time “box.”

Dr. Deshler noted that much of IAA's early work focused on the middle school and high school classroom as the unit of analysis. However, the IAA researchers have since learned that there is a lot of fragmentation, which presents problems for students. The CLC is a way to look beyond the classroom to the context of the entire school. IAA researchers are seeking ways for general education teachers to teach academically diverse classes in which the integrity of the content is maintained, critical content is selected and transformed to make it more learner-friendly, and the content is taught with active involvement.

Improving Academic Performance and Access to the General Education Curriculum for Secondary Youth with Disabilities

Content enhancement routine clusters within the CLC include:

- Planning and leading learning, including course, unit, and lesson organizers/roadmaps that tell students how they will be evaluated;
- Teaching concepts (content mastery) using a concept comparison table, concept anchoring routine, recall enhancement routine, question exploration guide, and course organizer;
- Explaining text, topics, and details; and
- Increasing performance.

Dr. Schumaker discussed strategy instruction, noting that students with disabilities often fail tests, although they may make up for test failure through assignments, class participation, and other activities. Levels 2 and 3 of the CLC are concerned with teaching students strategies they need to get the best grades possible. During the past 25 years, IAA staff has developed the Learning Strategies Curriculum, which has three strands: acquisition of information; storage of information; and expression and demonstration of competence. A learning strategy is defined as how a person plans, acts, and evaluates performance on a task and its outcome. Research has shown the positive outcomes for sentence writing, paragraph writing, error monitoring, and theme writing strategies. Furthermore, students who learned all of the writing strategies who took the district competency exam exceeded results for all students in the district. Performance of students who used the theme-writing strategy exceeded results compared to those who did not.

Dr. Schumaker and Dr. Deshler went on to explain the idea of strategic tutoring, a new type of tutoring in which the tutor assesses the student, the tutor and student construct a strategy, the tutor teaches the student how to use the strategy, and the student transfers the strategy into practice. The roles of the tutor are to explain the content and build knowledge, to share extensive knowledge of strategies, to apply principles of strategic instruction, and to mentor or connect with students. Strategic tutoring can be used at levels 2 and 3 of the CLC framework.

After the first round of intervention research in the late 1970s and early 1980s, IAA made a commitment to transfer the learning strategies to teachers. Initial efforts included traditional staff development (in-service on in-service days), but the results were not encouraging. Later, the researchers used an “enlightened” professional development approach that included interviews with teachers, partnership learning, participant choice, in-class modeling, and ongoing development. Today, the researchers are studying a third approach that involves instructional coaches. This approach includes all components of the enlightened approach, as well as onsite coaching and collaboration. Research has shown a large increase in implementation of teaching strategies with the presence of an onsite coach. For example, knowledge, skill acquisition, and classroom application increase when concepts are presented, modeled, and practiced; feedback is presented; and coaching is provided. Based on this research, IAA has created a CD-ROM that helps teachers to adopt strategies.

Dr. Schumaker then discussed the impact of school-change for students, including students with disabilities, using state competency test results as an outcome measure. To improve state competency test results, many teachers within a school must be trained and work together for change, she said. Research has shown that:

- Content enhancement yielded positive results for 10th grade general education economics students with and without disabilities at a high school in Muskegon, MI, in 2001-02. In physical science, students’ scores increased by approximately one letter grade. Failing students gained the most on unit tests.
- Also in Muskegon, MI, over three years, more than 90% students passed the writing competency exam, surpassing the state average and the average for suburban schools.
- Among Muskegon students who had been reading two or more years below grade level and received intensive instruction using the word identification strategy, their scores increased by about three grade levels. Students with reading comprehension scores two or more years below grade level were placed in a strategic

Improving Academic Performance and Access to the General Education Curriculum for Secondary Youth with Disabilities

reading class, and their scores increased by about one grade level in one semester.

- In the Topeka, KS, school district, students' use of complete and complicated sentences increased after the students learned the sentence writing strategy in English class.
- Mean test scores for math, writing, and reading increased over three years for all students taking the Maryland seventh grade functional test. Scores for students with disabilities increased in the third year.

Dr. Schumaker and Dr. Deshler concluded that, based on IAA's work, it appears that success for students with disabilities depends on validated practices that are implemented with fidelity in a coordinated fashion in a variety of venues. In addition, high-quality professional development experiences for teachers and strong administrative leadership must be present.

In response to questions from participants, the speakers said that:

- It is important to incorporate learning strategies like those they described into pre-service education for teachers. Such practices are being incorporated at the university level, but most professors say they do not have a venue to deliver the practices. Like high school teachers, university faculty members have limited time to teach these instructional practices and students do not have enough time to master them.
- They have found that only two or three new strategies can be taught successfully in one academic year because of teachers' full schedules.
- IAA staff has trained 1,500 people in all 50 states to share the learning strategies with other teachers. IAA also is developing teams of professional development experts to effect change in individual schools.
- To ensure gains of students with disabilities, it is important to consider teachers' experiences (e.g., to affirm their roles as professionals and give them a sense of hope) and to have strong administrative leadership.

Future Challenges in Secondary Education for Youth with Disabilities

Dr. Naomi Zigmond, Professor of Special Education, Department of Instruction and Learning, University of Pittsburgh, Pittsburgh, Pennsylvania

Dr. Zigmond shared her insights and views about future challenges for secondary school youth with disabilities. To begin, she suggested that, "There is a place in research for detective work as well as for finely crafted experimental studies," and that some of the most interesting detective work being done is the NLTS2.

Second, much has been learned about secondary school education—about what students with disabilities need to learn and how students with disabilities learn. However, the reality is that high school teachers continue to teach content, high stakes exams continue to be a challenge for all students, and students with disabilities should not be exempt from accountability standards and should have access to the curriculum.

Dr. Zigmond argued that students with disabilities need to learn mainstream content, as well as vocabulary, background knowledge, how to read for information, strategies for remembering and retrieving information, how to write in various genres, self-awareness, career planning, self-advocacy skills, social skills, how to read for pleasure, and how to fill leisure time. In other words, they need to learn what other secondary school students learn and much more that usually is not taught in school. Students with disabilities also need explicit, systematic, direct instruction to learn what others pick up incidentally; more practice to achieve mastery; and more time (although even with more time, they may master less than their peers). They also need to work longer and harder (although they may not learn as much even when they do work longer and harder).

Third, the co-teaching model of special education services for secondary students with disabilities is flawed as a concept and needs to be changed because co-teaching models focus on the reality of secondary schools, favor inclusion in content subject classes, define the role of special education as supporting access to general education curriculum, and relegate the special education teacher to be a support.

There is no evidence that students with disabilities learn with nothing more than support, Dr. Zigmond asserted. If students with disabilities are to learn content, then they should be placed in content classes with content experts who are given support to do a better job. Therefore, the role of the “consulting teacher” should be reinvented as a “coach” who works with general education content teachers to “teach it right the first time” to all of their students, including students with disabilities. Coaches also should instruct teachers on content enhancement strategies and routines that make content subject instruction user-friendly. There is also a need to find time in the secondary school schedule for explicit, direct instruction in the unique curricula that students need to learn that can also be delivered by the special education teacher. These curricula should include self-awareness, self-advocacy, social skills, career and transition planning, and reading skills and strategies.

Fourth, this plan provides a new definition of a highly qualified secondary special education teacher, as someone who is a highly skilled teacher responsible for teaching adolescent literacy, content reading, learning, remembering, test-taking strategies, social skills, self-awareness, self-advocacy, career planning; and transition planning. This individual would be a consultant teacher (coach) who can make the content more user-friendly.

In conclusion, Dr. Zigmond said that special education is at a crossroads. Challenges at this crossroad include to:

- Redefine secondary special education;
- Reinvent what should be the services for students with disabilities;
- Rethink the roles of secondary special education teachers;
- Rethink the preparation of secondary special education teachers; and
- Rethink preparation of general education and special education teacher educators.

Dr. Johnson and Dr. Jones ended the CBI by thanking the planners and participants and by suggesting that the participants adopt Dr. Zigmond’s challenge to rethink special education and how it can best serve students with disabilities.

Small Groups Discuss Research Implications, Gaps, and Barriers

Following the presentations about NLTS2 and the work of IAA, the CBI participants met in six small groups with featured researchers to learn more about current research and to discuss the implications of research results, gaps in the current research agenda, and barriers to research. One of the small groups met with Dr. Lynn Anderson-Inman, director of the Center for Advanced Technology in Education (CATE)/Center for Electronic Studying at the University of Oregon, and Dr. Michael Hock, assistant director of the Center for Research on Learning at the University of Kansas. The group was facilitated by NCSET Director, Dr. David Johnson.

Dr. Anderson-Inman said that one of the Center for Electronic Studying’s initiatives, Project EXCEL, addresses three barriers to success for struggling students: ineffective techniques for studying and learning; reading materials that are above students’ literacy levels; and classroom presentations that students find confusing or difficult to process. The project empowers students by teaching computer-based study strategies, providing electronic reading environments in which supports (e.g., definitions and interactive opportunities) are embedded in electronic text,

and using projected note taking in which notes taken by students are projected on a screen during class and made available to all students. The CATE researchers studied the interventions in urban middle and high schools in the context of whole-school reform. They found that inhibitors to school-wide adoption of the technology-supported interventions included teachers' preconceptions and low expectations of students, outdated and limited technology at the schools, the desire to have everyone at the school who was interested to be involved, and the intensive amount of time needed to effect changes by teachers. These inhibitors were overcome through data-based decision making to determine how best to leverage and use resources, increased funding for hardware and software, intensive involvement of a manageable number of teachers, and efforts to reach students directly through online learning (e.g., an online school through which students were taught computer-based study strategies).

Dr. Hock discussed the strategic tutoring model that is part of the Content Literacy Continuum. Using this model, a tutor helps students complete an assignment and fill in knowledge gaps, with the outcomes being immediate academic achievement, increased student knowledge base, good information processing, and "connected students." To succeed, he said, the tutors must have a rich knowledge of the strategies students need, strategic teaching skills, and the ability to mentor students. The model has four instructional phases: assessing the student's knowledge and strategies; constructing a new or revised strategy; teaching the strategy through modeling, guiding, and supporting; and transferring the strategy. IAA's research demonstrates that strategic tutoring can be effective with middle school students and under-prepared university students. After receiving strategic tutoring, students were able to: complete assignments successfully; acquire new content knowledge; learn and apply effective strategies; become "good information processors;" and feel "connected" with mentors.

After hearing from the featured researchers, the small group participants noted that:

- Ensuring schools' "ownership" of the new strategies helps to sustain the strategies after research funding ends.
- Professional development must go beyond one-day in-service training to include coaching of teachers.
- Whole-school reform eliminates the possibility of doing experimental design research, which requires very circumscribed conditions.
- Schools struggle with competing reform movements and mandates, and any successful school reform effort must tackle that problem at the school level.
- Pre-service education has not evolved to include new strategies and technologies, so public schools cannot be expected to incorporate new strategies and technologies successfully. In other words, teacher educators need to "walk the walk."
- There must be a paradigm shift in teachers' roles to focus on students as learners (i.e., giving students the strategies they need), rather than thinking of teachers as content specialists.
- There is a need to connect similar projects so project teams can cross-fertilize ideas. This might be accomplished through OSEP (e.g., through NCSET's Communities of Practice).
- New, research-based developments must be scaled up and widely implemented. For example, publishers should make the strategies available. Grants must also be large enough for multiple states to collaborate on scaling up the research.
- There is a need for better communication within states, but politics play a role.



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Facilitated 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 whole) for:

- High School Reform
 - o General Education
 - o Special Education
- Policy Development
- Future Research

3. From your current perspective, what are we missing in the current research agenda?

4. What are some of the barriers to conducting this type of research?

5. What are the key points from our discussion today that you believe are important to share with the large group?

Presenter Biographies

Lynne Anderson-Inman, Ph.D.

Dr. Lynne Anderson-Inman is Director of the Center for the Advanced Technology in Education and Director of the Center for Electronic Studying, both in the College of Education at the 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 on effective uses of technology and a frequent speaker at national and international conferences.

Fabricio E. Balcazar, Ph.D.

Fabricio E. Balcazar is an Associate Professor in the Department of Disability and Human Development at the College of Applied Health Sciences and the Department of Psychology at the University of Illinois at Chicago. Dr. Balcazar has conducted research over the past 20 years on the development of systematic approaches for promoting the empowerment of minorities and under-served 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, school-to-work 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. Dr. Balcazar and his staff are also replicating the model in a number of high schools within the Chicago Public School District as part of a new model dissemination grant.

Janis Bulgren, Ph.D.

Dr. Janis Bulgren is an Associate Research Scientist at the University of Kansas Center for Research on Learning. She received her Ph.D. at the University of Kansas in Special Education. She has served as principal investigator and/or project director for a variety of federally funded projects to address the success of students with learning disabilities and other youth considered at-risk for school failure. She has conducted a line of programmatic research focusing on instructional procedures for use in secondary inclusive classrooms in which students with disabilities are enrolled and has published numerous articles and chapters based on that line of research. She is the author of teachers' manuals in the Content Enhancement Series including those that facilitate instruction relative to higher order thinking in content classes. She has also conducted research on learning strategies and in the areas of students with emotional disturbances and adult learners.

Michael Bullis, Ph.D.

Dr. Michael Bullis is a Professor in the University of Oregon's College of Education, Major Director for the Special Education Area, and Director of the Secondary Special Education and Transition Work Group. He received his Ph.D. at the University of Oregon in 1983 in Special Education and Rehabilitation, specializing in research methods. Since 1986, Dr. Bullis has been awarded and managed 37 externally funded federal and state evaluation contracts, research, and model demonstration projects – totaling more than \$19 million and leveraging another \$1.5 million in state-matching funds. His major area of work has been on the school-to-community transition experiences of adolescents with emotional disturbances and high-risk behaviors. Dr. Bullis has directed community-based vocational programs, developed transition skills assessment instruments, and conducted both quantitative and qualitative longitudinal studies of the community transition experiences of high-risk adolescents, including two field initiated studies focusing on youth from the criminal justice system. Relative to this presentation, he administered two federally funded projects for high-risk adolescents in alternative education programs. He has more than 100 professional publications and regularly is invited to present across the country. Finally, Dr. Bullis teaches doctoral level research courses and serves on the editorial boards of the *Journal of Emotional and Behavioral Disorders* and *Rehabilitation Counseling Bulletin*.

Catherine Cobb Morocco, Ph.D.

For over 15 years, Catherine Cobb Morocco's work has focused on how schools can support vulnerable students in belonging and achieving academic excellence in the general education curriculum. Her focus has been on students with disabilities, low-performing students, and students coping with challenges related to poverty, immigrant status, and English language proficiency. The Reach Institute is a five-year collaboration between EDC and three universities to study how middle-grade teachers can engage in "teaching for understanding" in the major content areas, with students with mild to moderate disabilities. EDC's literacy strand is documenting changes in teachers' approach to teaching comprehension and composing, and changes in students' motivation to read, comprehension, and persuasive writing in two urban middle schools. She is principal investigator of a four-year project, REACH for READING, which is developing a model of intensive instruction in foundation reading skills for middle school students scoring on the lowest quartile on standardized reading tests. Dr. Morocco also currently directs several research initiatives involving whole-school reform. *The Good High Schools* Project is studying three high performing urban schools in Florida, New York, and Virginia, to identify the practices that enable all students, including those with disabilities, to participate in and improve their performance on high stakes, statewide assessments. The Beacons of Excellence project recently completed a similar study of high performing urban middle schools. A book about those three schools, titled *Cultures of Excellence in Three Urban Middle Schools*, is forthcoming from Teachers College Press. Dr. Morocco is author of *Writers at Work* (SRA, Inc.) a curriculum for teachers that supports the writing process approach, and numerous articles and book chapters on professional development for mainstreaming and inclusion. In addition to this work, Dr. Morocco's work includes three chapters in *The Diagnostic Teacher, Revitalizing Professional Development*, just issued by Teacher College Press and a special issue of *Learning Disabilities Quarterly*, focused on teaching for understanding with students with disabilities. Dr. Morocco holds a doctorate in language and literature from Harvard University and has taught at the middle school, high school, and university levels.

Louis Danielson, Ph.D.

Dr. Louis Danielson is Director of the Research to Practice Division in the Office of Special Education Programs (OSEP), U.S. Department of Education. Dr. Danielson received his Ph.D. in Educational Psychology at Pennsylvania State University in 1976. For the past twenty-three years, Dr. Danielson has helped with leadership roles at OSEP and is currently responsible for the discretionary grants program, including research, technical assistance and dissemination, personnel preparation, technology, parent training priorities, national evaluation activities, and other policy-related studies at OSEP. A frequent contributor to professional journals, Dr. Danielson is a frequent speaker at national and international conferences and events focusing on special education. His particular areas of interest include policy implementation and national evaluation studies.

Betsy Davis, Ph.D.

Betsy Davis is a Research Scientist at Oregon Research Institute in Eugene, OR. Dr. Davis' particular expertise is in both qualitative and quantitative research design and data analysis. She currently serves as an investigator on three large-scale projects funded through the National Institute of Mental Health (NIMH). Two projects examine family and other social processes associated with child and adolescent adjustment, the third is a development project evaluating the psychometric properties of an internet-based parent-child observational protocol. Dr. Davis is also an investigator on two intervention studies funded through the National Institute of Drug Abuse (NIDA). One project is a large-scale implementation of a culturally sensitive early parenting program targeted as a preventive intervention for substance use in American Indian youth. The second NIDA study is a controlled clinical trial of substance use treatment models with Anglo and Hispanic adolescents and families. Additionally, Dr. Davis serves as a Research Associate at the University of Oregon, Institute for the Development of Educational Achievement, where her attention has focused on the need to address the knowledge and literacy deficits of disadvantaged, minority adolescents utilizing the most efficient, research-validated practices available. Her work in education has led to upcoming funding of a large-scale NIDA study integrating a literacy-strengthening program with a substance use/HIV intervention that will serve to prevent HIV/AIDS infection in urban Aboriginal adolescents. Dr. Davis currently serves on the editorial board of the APA journal, *Psychological Assessment*.

Donald D. Deshler, Ph.D.

Donald D. Deshler is a Professor of Special Education in the Department of Special Education and Director of the Center for Research on Learning (CRL) at the University of Kansas. Dr. Deshler (in conjunction with other staff at the CRL) 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

Improving Academic Performance and Access to the General Education Curriculum for Secondary Youth with Disabilities

was the original editor of the Council on 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, the Louise Byrd Outstanding Graduate Educator of the Year Award, and the Higuchi Research Achievement Award at the University of Kansas. He has also been awarded the Learning Disabilities Association of America Award for outstanding service to the field of learning disabilities.

James Frasier, Ph.D.

Dr. James R. Frasier is a researcher at the Center on Education and Work and member of the University of Wisconsin-Madison Academic Staff. He has served as the leader for several private and public sector research teams and advisory panels. Prior to his work at the Center, he was the Global Manager for Learning Research at Motorola University. He was also a public educator for 15 years in secondary education and has published several articles on vocational education assessment and performance improvement programs for disadvantaged youth and students with disabilities. Dr. Frasier received his doctorate at the University of Illinois at Urbana-Champaign with a focus on vocational special needs education and education policy analysis.

Michael Hock, Ph.D.

Dr. Michael Hock is the Assistant Director for the University of Kansas Center for Research on Learning. In addition, he is director of the Kansas University Athletic Department's academic support program. Michael is a graduate of the University of Kansas where he earned his Ph.D. in Special Education (emphasis in learning disabilities) and teaching and leadership. Prior to his appointment at KU, Michael was a high school history and government teacher for four years and teacher of students with learning/behavior disabilities for 12 years. He served as district curriculum supervisor for before leaving K-12 education. He has extensive experience as an instructor and certified trainer in the Kansas Strategic Instruction Model. His current research interests relate to teacher-driven professional development models and the change process. He is particularly interested in teaching skills and strategies to prepared students that support the development of independent learners. Michael's most recent efforts have been directed at increasing student commitment to learning and academic motivation. Currently, he is in the process of validating an academic and personal motivation strategy called Possible Selves. Possible Selves challenges students to assess their hopes, expectations and fears for the future in light of the need for skills, strategies, and knowledge in today's classrooms. For the past eight years he has been involved in developing and validating the Strategic Tutoring Model which has been used with student-athletes at the University of Kansas. The effectiveness of this model has been validated with junior and senior high students and with youth in Casey Family Foster Care Programs in Seattle, Rapid City, Tucson, and Oklahoma City. He was the 1988 recipient of the national Outstanding Teacher Award by the Council for Learning Disabilities.

Margo Izzo, Ph.D.

Dr. Margo Izzo is Program Manager for the Special Education and Transition area at the Nisonger Center, a University Center of Excellence In Developmental Disabilities (UCEDD) at Ohio State University. With over 26 years experience in the special education field, Dr. Izzo has extensive experience with grant management, program evaluation, and political advocacy. She has also developed educational curricula for students with disabilities and their parents, conducted numerous trainings, focus groups, and interviews with teachers and students, managed the development of videocassettes, Web sites, and other dissemination products including a national teleconference, and has published several articles, papers, and information briefs on disability and transition issues. Currently, Dr. Izzo is the Principal Investigator of two federally funded education projects, Steppingstones of Technology Innovation, Phase 1 and The Faculty and Administrator Modules in Higher Education (FAME) grant. The two-year Phase 1 Steppingstones focuses on improving career planning, grant information literacy, and reading achievement for high school students with disabilities in inclusive classrooms through technology-based instruction. The three-year FAME grant concentrates on improving the teaching/learning process for postsecondary students with disabilities through the development of a web-based training curriculum. Prior to her current position at OSU, Dr. Izzo was the Project Coordinator of Ohio's Transition Systems Change Grant, a five-year federally funded project located at the Ohio Department of Education (ODE). This project was designed to improve transition services by facilitating systemic change within eight agencies at both the state and local level. Dr. Izzo completed her Ph.D. in Special Education, Rehabilitation, and Research at OSU in 1998, and received her MA from George Washington University in Washington D.C. She is a recipient of a Mary E. Switzer Fellowship from the National Institute on Disability and Rehabilitation Research (NIDRR) and is also a Past President of the Division of Career Development and Transition (DCDT) within the Council for Exceptional Children (CEC).

Larry Kortering, Ed.D.

Larry Kortering is a Professor in Special Education at Appalachian State University and is the principal investigator on a grant that helps high school algebra and biology teachers design, implement, and evaluate interventions that reflect the principles of Universal Design for Learning (UDL). His current research interests focus on helping educators to better understand schooling from the perspective of students, including students who have dropped out of school.

Krista Kutash, Ph.D.

Dr. Kutash is Professor and Deputy Director of the Research and Training Center for Children's Mental Health at the University of South Florida in Tampa. She has had clinical experience as a social worker before devoting full time to research and training. Her doctorate is in Educational Measurement and Research from the University of South Florida, and she has earned 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 who have disabilities and their families. Dr. Kutash has over 100 publications and presentations in the area of improving the outcomes for children. She has authored a comprehensive review of the empirical base of the system of care for children who have emotional and behavioral disabilities and their families (Kutash & Rivera, 1996) and co-edited the book, *Outcomes for children and youth with behavioral and emotional disorders and their families: programs and evaluation best practices*, which is in its second edition. She serves as Vice Chair of the University's Institutional Review Board and is a member of the NIDRR standing review panel. Dr. Kutash holds a joint appointment in the Department of Special Education where she trains doctoral students in the techniques of program evaluation, and has served on the board of the National Association of Rehabilitation Research and Training Centers for 10 years.

B. Keith Lenz, Ph.D.

B. Keith Lenz is Senior Research Scientist at the center for research on Learning and an Associate Professor in the Department of Special Education at the University of Kansas. He received his Ph.D. at the University of Kansas in Special Education. Dr. Lenz is also Director of the Smarttogether 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 skills 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.

Jean E. Ness, Ed.D.

Dr. Jean E. Ness is Principal Investigator and Project Director at the Institute on Community Integration at the University of Minnesota. The focus of her work is developing programs for and with American Indian high school and tribal college students to support the retention and completion of their goals. To that end, Dr. Ness has directed several federally funded projects that address both the high school and college needs of American Indians. Most recently Dr. Ness, along with her colleague Jennifer Huiskens, developed a transition curriculum for American Indians that addresses key skill areas to prepare these students for higher education and work. The curriculum, published in 2003, is currently being implemented in BIA schools, school districts, and tribal and community colleges throughout the country. Dr. Ness is a frequent speaker at state and national conferences on issues regarding the transition process for American Indians.

Lynn A. Newman, Ed.D.

Dr. Newman, a Senior Education Researcher in SRI International's Center for Education and Human Services, has more than 25 years of experience in education and social science research in the disability policy and human services fields. Dr. Newman currently is co-director of the National Longitudinal Transition Study-2 (NLTS2), being funded by the U.S. Department of Education's Office of Special Education Programs. She also serves as an analyst and task leader for the Special Education Elementary Longitudinal Study (SEELS). Dr. Newman has had leadership roles on multiple large-scale studies and evaluations, including the original National Longitudinal Transition Study, the Study of School-linked Services for Children with Disabilities and Their Families, and California's Statewide Healthy Start/Comprehensive Integrated School-linked Services

Initiative Evaluation. Dr. Newman's research interests focus on various aspects of outcomes for students and youth with disabilities, including their postsecondary education experiences, as well as families' involvement in their children's education and the influence of that involvement on education outcomes.

Jean B. Schumaker, Ph.D.

Jean Schumaker is Associate Director of the University of Kansas Center for Research on Learning and Professor in the Departments of Human Development and Special Education. She received her Ph.D. at the University of Kansas in Developmental and Child Psychology in 1976. 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. 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: *Learning Strategies Curriculum*, a curriculum comprised of fifteen teachers' manuals for teaching students learning strategies; *Social Skills for Daily Living*, ASSET, and *Cooperative Strategies Series*, three social skills curricula; eight manuals in the *Content Enhancement Series*, a series developed to improve the delivery of content in mainstream classrooms; and numerous articles and 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 within the Council for Exceptional Children during 1999-2000. In 1996, she received the Division's award for Outstanding Contributions to the field of learning disabilities.

Robert A. Stodden, Ph.D.

Dr. Robert A. Stodden is the current Past President of the Association of University Centers on Disabilities (AUCD) board of directors. Professionally trained in Psychology, Special Education, and Rehabilitation, he has served more than twenty-five years as a national leader in the fields of special education, school to adult transition, postsecondary education, and employment for persons with disabilities. Since 1988, he has served as the founding Director of the Center on Disability Studies (a University Center for Excellence) and Professor of Special Education at the University of Hawaii at Manoa. He also serves as the originator and director of the National Center for the Study of Postsecondary Educational Supports (NCSPEs) and the National Technical Assistance Center (NTAC) for the Employment of Asian Americans & Pacific Islanders with Disabilities at the University of Hawaii at Manoa. Over the past 25 years, Dr. Stodden has served as principal investigator/director for more than 100 research and training projects focused upon improving the quality of life for all persons with disabilities. He has been a keynote speaker and invited presenter for many international and national conferences, and has served as a consultant within numerous foreign countries and for more than 20 different states within the United States. In 1995, Dr. Stodden was selected as a Joseph P. Kennedy Foundation Senior Policy Fellow, working in the United States Senate to develop and draft policy language for major pieces of disability legislation. In addition to serving as the President of the board for AUCD, he serves on policy committees of the National Association of Rehabilitation Research and Training Centers, and as a member of the Board of Directors for Division on Development Disabilities, International Council for Exceptional Children (CEC).

Gerald Tindal, Ph.D.

Dr. Tindal joined the University of Oregon in 1984 and is currently Professor and Director of the Behavioral Research and Teaching (BRT) as well as Area Head of Educational Leadership. He teaches courses that focus on measurement systems for general and special education teachers and administrators, training teachers and administrators in his coursework. Dr. Tindal's work has fostered ongoing connections with local and state education agencies. His research focuses on the integration of students with disabilities in general education classrooms using student performance indicators to develop optimal instructional programs. For the past decade, Dr. Tindal has conducted research on student participation in large scale testing. This work includes investigations of test accommodations, teacher decision-making using curriculum-based measurement, and extended assessments of basic skills. Over the past 20 years at the University of Oregon, he has been awarded approximately 20 million dollars in external grants and contracts with district, state, and federal agencies. Dr. Tindal has published more than 60 research articles, 10 book chapters, and three books. He publishes and reviews articles in many special education journals: *The Journal of Special Education*; *Learning Disabilities: Research and Practice*, *Special Services in the Schools*; *Journal of Technology*,

Improving Academic Performance and Access to the General Education Curriculum for Secondary Youth with Disabilities

Learning, and Assessment; Remedial and Special Education (RASE), Assessment for Effective Instruction, Journal of Educational Research and Learning Disabilities Quarterly.

Teri Wallace, Ph.D.

Teri Wallace is a research associate at the Institute on Community Integration at the University of Minnesota. Her research interests include examining the impact of inclusive high school environments on student engagement, identifying factors associated with preparing and supervising paraeducators 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.

Naomi Zigmond, Ph.D.

Dr. Naomi Zigmond is Professor of Special Education in the Department of Instruction and Learning, School of Education, University of Pittsburgh. She received her Ph.D. at 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 of a century. For the past several years, Dr. Zigmond led a team of researchers and practitioners in the development of 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 used in secondary schools. She has published more than 75 articles in refereed 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.