Reading, Behavior, and Inclusive Practice Innovation Configurations to Improve Teacher Preparation

March 2008

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Paper presented at the 2008 Annual Meeting of the American Educational Research Association

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This work was originally produced in whole or in part by the National Comprehensive Center for Teacher Quality with funds from the U.S. Department of Education under cooperative agreement number S283B050051. The content does not necessarily reflect the position or policy of the Department of Education, nor does mention or visual representation of trade names, commercial products, or organizations imply endorsement by the federal government.

The National Comprehensive Center for Teacher Quality is a collaborative effort of Education Commission of the States, ETS, Learning Point Associates, and Vanderbilt University. 2807_07/08

The Vanderbilt University site of the National Comprehensive Center for Teacher Quality addresses teacher quality issues for students with disabilities and at-risk characteristics, including the availability of highly qualified and effective teachers in general education classrooms, remedial education roles, and special education programs. Much of the work over the last two years has focused on the preparation and continuing education for highly qualified teachers.

Contents

Overview

Innovation configurations were developed to describe the essential components and implementation levels of scientifically based instruction in reading, classroom organization and behavior management, and inclusive practices. Innovation configurations were applied to the course syllabi of 27 special education teacher preparation programs in a large population state to determine the degree to which programs reflected scientifically based practices. Results from this and other studies suggest that significant changes are needed in teacher preparation and continuing education.

The context for development of the innovation configurations and their use in evaluating teacher preparation coursework is presented in this section. Students with special needs are defined and described, followed by a brief review of federal education policies. Connections are made between students with special needs, federal policies, and the three innovation configurations presented in this paper.

Students With Special Needs

The term *special needs* refers to students with disabilities or who are at risk for poor educational outcomes (e.g., low achievement, noncompletion of high school, and antisocial behavior that interferes with effective instruction). Multiple risk factors correlated with poor outcomes include (a) attendance at a low-performing school where the teachers often have less experience and are less likely to be fully prepared in the subjects they teach; (b) poverty; (c) race or ethnic status; (d) poor prenatal, perinatal, and postnatal health care and nutrition; and (e) low family educational attainment and poor models for cognitive and social development (Donovan & Cross, 2002). Not all children with one or more of these characteristics will experience poor educational outcomes and, in fact, most do complete high school, although often with low achievement. Some do very well despite risk status (Masten, 2001).

Multiple inborn (e.g., temperament) and environmental (e.g., positive relationships with adults) factors can create resilience in children, enabling them to overcome risk factors and achieve good outcomes (Masten, 2001). One of the most important factors is attendance at a high-performing school with effective teachers. Another is learning to read competently (Reschly, in press). Teachers who deliver effective instruction and provide emotional support are critical factors in overcoming risk factors.

Policy Framework

The No Child Left Behind (NCLB) Act (2002) and the Individuals with Disabilities Education Act (IDEA, 2004) place high priority on improving results for students with special needs. Two of the NCLB priorities address students with special needs—specifically (a) low-achieving children including English language learners, children with disabilities, and children who struggle with reading; and (b) closing achievement gaps between minority and nonminority students and economically advantaged and disadvantaged students. The key mechanisms for accomplishing NCLB goals are school reform and scientifically based instruction that improves educational achievement.

IDEA also places strong emphasis on improving academic achievement and success in the general education curriculum for students with disabilities, as well as improving broader outcomes such as achievement that meets state benchmark standards, improved integration into the general education curriculum and environment, graduation with a regular diploma, and positive early adult outcomes. Requirements for scientifically based instruction and scientifically based reading instruction are comparable in NCLB and IDEA.

NCLB emphasizes the use of instruction based on scientifically based research (SBR) as the foundation for improving results in general and remedial education. The term *scientifically based* appears 181 times in the statute, a clear indication of the importance Congress placed on the implementation of instructional procedures grounded in science. As defined in NCLB, SBR was largely limited to randomized control designs. Although the NCLB and IDEA have not changed, terminology in recent discussions has evolved from SBR to *evidence-based practice* for at least two reasons. First, the narrow criteria for SBR excluded evidence from less rigorous research methodologies; secondly, only a limited number of true randomized control trial experiments have been conducted on many important educational research questions.

The criteria for evidence-based practice include a broader array of evidence from different research methodologies and have the effect of including a much greater number of research studies on which to base instruction and interventions. However, randomized control designs with clear implications for instruction and interventions do exist in some areas, most notably for our work, in reading and classroom behavior management.

Innovation Configurations

Innovation configurations have been used for at least 30 years in the development and implementation of educational innovations and methodologies (Hall & Hord, 1987; Roy & Hord, 2004). Innovation configurations have been used to evaluate programs and the fidelity of implementation of educational interventions, that is, the degree to which the intervention was implemented as designed and intended. Innovation configurations are useful tools in defining desirable characteristics of programs and assessing the degree to which these desirable features are implemented.

Innovation configurations have been used most often as professional development tools to guide implementation of an innovation within a school and to facilitate the change process. Some educators use innovation configurations for self-reflection and self-assessments. Other uses include program evaluation and research. We developed the three innovation configurations presented in this paper to evaluate teacher preparation coursework and to assess the degree to which selected evidence-based practices are implemented in required teacher preparation coursework.

Innovation configurations (see Tables 1, 2, and 3) typically are established through tables that have two dimensions. Essential components of the innovation or program are listed in the far-left column along with descriptors and examples to guide interpretation of information. The essential components of evidence-based practice must originate in research with practice demonstrations and application. The components are critical. *The wrong components render irrelevant any further examination of practices.*

The second dimension is degree of implementation. In the top row, several levels of implementation are defined. For example, no mention of the essential component is the lowest level of implementation and might be given a score of zero. Increasing levels of implementation may be assigned progressively higher scores. Examples of higher implementation levels are as follows:

- **Mentioned:** The component is mentioned in the syllabus (code = 1).
- **Mentioned plus readings/tests** are specified in the syllabus (code = 2).
- **Mentioned plus readings/tests, plus assignments such as papers, projects,** are required in the syllabus (code = 3).
- **All prior levels plus supervised practice (fieldwork) with feedback about degree of success** are required in the syllabus (code = 4).

Scores created to represent different levels of implementation are on an ordinal scale, that is, a higher number indicates more of something—in this case, more thorough implementation of an innovation configuration component—but cannot be interpreted as if the intervals between the scores are equal. Therefore, the difference between 1 and 2 cannot be assumed to be the same amount of difference as between 3 and 4. Furthermore, a score of 4 indicates more thorough implementation than a score of 2, but it cannot be interpreted as twice as much of some quality as a score of 2. We urge potential users to consider these limitations in the score scale.

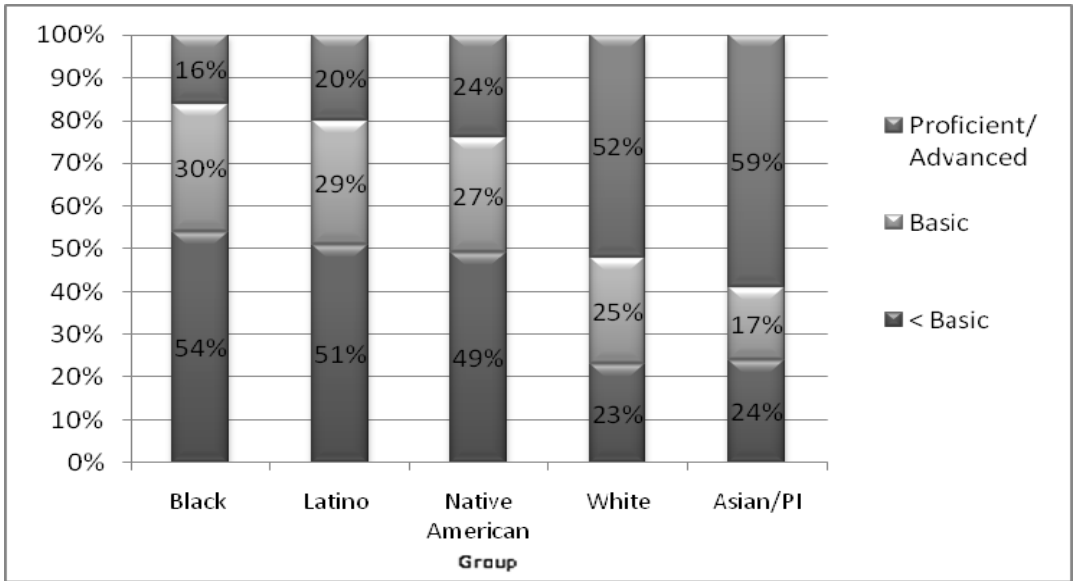
Scientifically Based Reading Instruction

NCLB is explicit regarding the content of reading instruction and the adoption of scientifically based reading instruction. Scientifically based reading instruction criteria specify substantial instruction in the five components of reading (phonemic awareness, phonics, fluency, vocabulary, and comprehension), systematic and explicit instruction, integration of the five components, and universal screening for all children with frequent progress monitoring and formative evaluation for struggling readers (Snow, Burns, & Griffin, 1998).

The reauthorization of IDEA (2004) further reflected congressional commitment to the use of scientifically based reading instruction in the instruction and related services provided to students with disabilities. First, NCLB (2002) was cited at least 10 times in IDEA, frequently around issues of alignment of requirements in such areas as highly qualified teachers, accountability mechanisms, data collection, and state reports to the U.S. Department of Education. The clear intent was to produce closer alignment among what has been regarded traditionally as general, remedial, and special education. Moreover, the criteria for scientifically based reading instruction were incorporated by reference into IDEA, explicitly at 34 C.F.R.300.35. This provision established the same scientifically based reading instruction criteria in both NCLB and IDEA.

Improved reading is critical to accomplishing the goals of NCLB and IDEA. The magnitude of the problem is illustrated by the 2007 National Assessment of Education Progress (NAEP) results for fourth-grade children. The proportion of children reading below basic levels is too high for all groups, but is particularly disturbing for the African-American (54 percent), Hispanic (51 percent), and Native American (49 percent) groups (see Figure 1). High achievement in most subjects, socioeconomic mobility, and access to jobs with good incomes are largely dependent on reading and other complex literacy skills.

Figure 1. 2007 NAEP Grade 4 Reading Scores



Source: Lee, Grigg, & Donahue. *The Nation's Report Card: Reading 2007* (from Table A-9, pp. 54–55). National Center for Education Statistics, U.S. Department of Education.

The overall implementation of scientifically based reading instruction in general education teacher preparation is inadequate (Steiner & Rozen, 2004; Walsh, Glaser, & Wilcox, 2006). Syllabi and other course information in required reading classes typically did not implement the five key components including comprehension and vocabulary. Walsh et al. (2006) reported that only 15 percent of 72 teacher preparation programs met criteria for implementing scientifically based reading instruction.

The inclusion of scientifically based reading instruction principles in the preparation of special education teachers for high-incidence disabilities (e.g., specific learning disability) is similar. The vast majority of new special education teachers are not well prepared in the five major content areas of reading or in the instructional principles of systematic and explicit instruction, universal screening, and progress monitoring with formative evaluation (Reschly, Holdheide, Smartt, & Oliver, 2007; Vaughn & Linan-Thompson, 2004).

Smartt and Reschly (2007) examined teacher preparation in scientifically based reading instruction, including teacher preparation programs, national standards from scientific-professional associations, state standards for teacher preparation program approval, and state credentialing requirements. Significant gaps regarding scientifically based reading instruction implementation were identified in each of the areas. Smartt and Reschly (2007) made the following recommendations regarding the gaps in teacher preparation:

- Professional association content standards (e.g., International Reading Association, National Council for the Accreditation of Teacher Education Programs) should reflect and promote scientifically based reading instruction.
- Teacher preparation and continuing education should incorporate scientifically based reading instruction, including supervised practice in implementation with average and struggling readers.
- Teacher preparation should provide supervised practice with universal screening, progress monitoring, and formative evaluation.
- States should implement changes in standards for teacher licensure and approval of teacher preparation programs to align with scientifically based reading instruction. (Two states, Maryland and Colorado, already have done so.)
- States need to implement teacher licensure examinations that do a better job of assessing teacher candidates' qualifications in scientifically based reading instruction.
- Teacher preparation programs should ensure the implementation of instruction based on the best science available and include scientifically based reading instruction in required coursework and experiences. Scientifically based reading instruction should be taught thoroughly including lecture, discussion, readings, projects, modeling, tests, and supervised practice with feedback. (Collaboration across teacher preparation programs is effective in improving scientifically based reading instruction. Exemplary collaborative programs exist in Maryland and Texas.)
- Teacher preparation programs and other education agencies should deliver continuing education opportunities in scientifically based reading instruction for current teachers, most of whom were not educated in its essential knowledge base.

Reading Innovation Configuration

The scientifically based reading instruction innovation configuration (SBRI-IC) was developed as a tool to implement these recommendations. The first step in improving teacher preparation in scientifically based reading instruction is an explicit description of what is needed. The content validity is based on developing items that reflect reading research and the prevention of reading problems (Adams, 1990; Moats, 1999; National Reading Panel, 2000; Snow, Burns, & Griffin, 1998; Torgesen & Mathes, 2000). The 11 components for the SBRR-IC were based on this literature, which is deeply embedded in federal education policy (NCLB, 2002; IDEA, 2004).

The SBRI-IC appears in Table 1. The descriptors that appear in the first column under each component are meant as a guide for users of the innovation configuration to clarify understanding and give examples of what each component may look like in a classroom reading program and in teacher preparation instructional materials. The big ideas under each component have been bulleted to assist with scoring. Bulleted items are not meant to be all inclusive; there may and will be other items that also fit with the intended meaning of each component. Moreover, not all bulleted items must appear in the syllabus for credit to be given on the component. Scoring guides for the innovation configurations appear in Appendixes A and B.

Scientifically Based Reading Instruction Research

The SBRI-IC was applied to the syllabi for required courses in the special education teacher preparation programs in a large state with over 30 teacher preparation programs at institutions of higher education (IHEs) (Smartt, Reschly, Holdheide, 2007). Two goals were addressed in the study: (a) implementation of scientifically based reading instruction, classroom management, and inclusive practices and (b) reliability of the three innovation configurations.

Twenty-seven of the 31 IHEs submitted course syllabi (Smartt et al., 2007). The course syllabi were related to noncategorical, high-incidence teacher preparation programs. Graduates of these programs typically teach students with disabilities in the categories of learning disabilities, emotional disturbance, and mild mental retardation. The interjudge agreement for the SBRI-IC was .84 for direct agreement and .96 for agreement within adjacent ratings. These reliability results are sufficient to use the innovation configuration in evaluation studies.

Scientifically based reading instruction in the preparation of special education teachers in this state was similar to results for general education teachers in other states (Steiner & Rozen, 2004; Walsh et al., 2006). Few of the 27 institutions met all of the SBRI-IC criteria, and nearly all did little or nothing with the key elements of systematic instruction, explicit instruction, universal early screening, and progress monitoring. Programs varied significantly in the implementation of the five key reading components (phonemic awareness, phonics, fluency, vocabulary, and comprehension). From one third to one half of the programs taught the basic five components at the level of mentioning in the syllabus and treatment in class with required readings, tests, quizzes, and project or paper. There was little evidence of supervised practice in these components in the course syllabi for most programs. Our overall impression is that implementation of scientifically based reading instruction may be slightly better in special than general education, but there is a long way to go in both areas.

Table 1. Scientifically Based Reading Instruction Innovation Configuration (SBRI-IC)

	Code = 0	Code = 1	Code = 2	Code = 3	Code = 4	
Instructions: Place an X under the appropriate level of implementation for each course syllabus that meets the criteria specified from 0 to 4. Score and rate each item separately. Descriptors and/or examples are bulleted below each of the components.	**No evidence** that the component is included in the class syllabus	Component is **mentioned** in class syllabus.	Syllabus mentioned component in class and required **readings and tests and/or quizzes**	Syllabus mentioned component in class, with readings, tests, and **assignments, projects for application** • Observations • Lesson plans • Clsrm modeling	Syllabus mentioned component in class, req rdg, tests, quizzes, assignments, projects, **and teaching with application and feedback** • Fieldwork (practicum) • Tutoring	**Rating:** The rating in this column is the highest score for any syllabus on each of the respective components.
SBRI/NCLB/IDEA • *Preventing Reading Difficulties in Young Children* (1998) • National Reading Panel Report (2002) • Reading success for **all** students • Scientifically based research—randomized studies, peer reviewed, replicated, minimize bias • NCLB mandates SBRI • Research-based strategies • 5 essential elements of reading (phonemic awareness, phonics, fluency, comprehension, vocabulary)						**Rating:**
Phonemic Awareness (This is ideally subsumed under the broader topic Phonological Awareness.) • Individual speech sounds, phonemes • Early indicator of risk • Precursor to phonics • Detect, segment, blend, manipulate phonemes (sounds) example: /b/ /a/ /t/ = bat • Rhyming, alliteration in preschool, K • Elkonin boxes—common activity						**Rating:**
Column Subtotals:						

	Code = 0	Code = 1	Code = 2	Code = 3	Code = 4	
Instructions: Place an X under the appropriate level of implementation for each course syllabus that meets the criteria specified from 0 to 4. Score and rate each item separately. Descriptors and/or examples are bulleted below each of the components.	**No evidence** that the component is included in the class syllabus	Component is **mentioned** in class syllabus.	Syllabus mentioned component in class and required **readings and tests and/or quizzes**	Syllabus mentioned component in class, with readings, tests, and **assignments, projects for application** • Observations • Lesson plans • Clsrm modeling	Syllabus mentioned component in class, req rdg, tests, quizzes, assignments, projects, **and teaching with application and feedback** • Fieldwork (practicum) • Tutoring	**Rating:** The rating in this column is the highest score for any syllabus on each of the respective components.
Phonics • Correspondence of sounds and letters • Phoneme-grapheme correspondences • Blending, decoding, encoding • Syllable types • Prefixes, suffixes, base words • Non-sense words (assessment) • Alphabetic principle • Word analysis • Words are composed of letters (graphemes) that map to phonemes. • Letters and sounds work in systematic way.						**Rating:**
Fluency • Rate, accuracy, and prosody • Repeated readings • Fluency training • Partner reading • Measurable goals • Chart progress						**Rating:**
Vocabulary • Taught directly and indirectly • Pre-teach • Oral language • Multiple contexts, meanings • Choosing and leveling words for explicit instruction • Word consciousness • Context • Morphemes						**Rating:**
Column Subtotals:						

	Code = 0	Code = 1	Code = 2	Code = 3	Code = 4	
Instructions: Place an X under the appropriate level of implementation for each course syllabus that meets the criteria specified from 0 to 4. Score and rate each item separately. Descriptors and/or examples are bulleted below each of the components.	**No evidence** that the component is included in the class syllabus	Component is **mentioned** in class syllabus.	Syllabus mentioned component in class and required **readings and tests and/or quizzes**	Syllabus mentioned component in class, with readings, tests, and **assignments, projects for application** • Observations • Lesson plans • Clsrm modeling	Syllabus mentioned component in class, req rdg, tests, quizzes, assignments, projects, **and teaching with application and feedback** • Fieldwork (practicum) • Tutoring	**Rating:** The rating in this column is the highest score for any syllabus on each of the respective components.
Comprehension • Questioning strategies (before, during, and after reading) • Summarize/predict/retell • Metacognitive strategies • Teach both narrative and expository text structure • Collaborative strategic reading						**Rating:**
Integration • Planned connections of instruction for 5 essential components of reading • Weaving of 5 essential components of reading (or any combination of components), first taught in isolation, always placed back in meaningful context • Integrated						**Rating:**
Systematic Instruction • Planned/purposeful/sequential • Step-by-step • Example: Teach certain letters (b, m, a) before others (y, x, tch). • Teach from easy to more difficult. • Directions for determining if reading programs use skills sequence and provide adequate practice						**Rating:**
Column Subtotals:						

	Code = 0	Code = 1	Code = 2	Code = 3	Code = 4	
Instructions: Place an X under the appropriate level of implementation for each course syllabus that meets the criteria specified from 0 to 4. Score and rate each item separately. Descriptors and/or examples are bulleted below each of the components.	**No evidence** that the component is included in the class syllabus	Component is **mentioned** in class syllabus.	Syllabus mentioned component in class and required **readings and tests and/or quizzes**	Syllabus mentioned component in class, with readings, tests, and **assignments, projects for application** • Observations • Lesson plans • Clsrm modeling	Syllabus mentioned component in class, req rdg, tests-quizzes-assignments, projects, **and teaching with application and feedback** • Fieldwork (practicum) • Tutoring	**Rating:** The rating in this column is the highest score for any syllabus on each of the respective components.
Explicit Instruction • Direct/straightforward • No room for guessing • Example: This is the letter B; it represents the /b/ sound. • I do it, we do it, you do it.						**Rating:**
Screening Assessment • Early identification and prevention • Brief measures • ALL students • Identifying students who require additional support • Valid and reliable instruments						**Rating:**
Progress Monitoring • Ongoing and frequent assessment for those requiring additional support • Provide additional support, monitor every 1–2 weeks, etc. • Instructional modifications made accordingly • Reflects appropriateness of the teacher's intervention						**Rating:**
Column Subtotals:						
Column Totals (pp. 1–4):						

Classroom Organization and Behavior Management

Similar to scientifically based reading instruction, both NCLB and IDEA endorse schoolwide and classroom applications of positive behavior supports and behavioral strategies to improve student learning and educational outcomes. For example, NCLB (2002) requires local educational agencies to:

> (A) teach and address the needs of students with different learning styles, particularly students with disabilities, students with special learning needs (including students who are gifted and talented), and students with limited English proficiency; (B) **improve student behavior in the classroom and identify early and appropriate interventions to help students described in subparagraph (A) learn** [emphasis added]. (Section 2122, (b)(9)(A, B))

A critical congressional finding inserted into IDEA (2004) endorses schoolwide literacy, behavior supports and management, and prevention of disabilities:

> Almost 30 years of research and experience has demonstrated that the education of children with disabilities can be made more effective by providing incentives for whole-school approaches, scientifically based early reading programs, positive behavioral interventions and supports, and early intervening services to reduce the need to label children as disabled in order to address the learning and behavioral needs of such children. (Title I, A(c)(5)(F))

And again, as in scientifically based reading instruction, highly qualified teachers are needed to achieve the behavioral goals in NCLB and IDEA. Coping with behavior problems, however, is a significant source of teacher stress and burnout (Brouwers, & Tomic, 2000) and a significant reason that teachers leave the profession (Coggshall, 2006; Ingersoll & Smith, 2003). If teachers are not able to effectively manage student behavior, instructional time is lost, which leads to reduced opportunities to learn essential content, skills, and competencies. Teacher preparation and new-teacher support that include content and supervised experiences with classroom management and interventions for disruptive behavior can improve teacher retention and effectiveness.

Disruptive behaviors frequently reduce access to general education curricula and classrooms for students with disabilities and diminish the benefits of instruction for students with at-risk characteristics and disabilities, regardless of setting. For example, inattention and disruptive behaviors diminish the effects of small group, standard protocol reading interventions (Torgesen et al., 1999; Vaughn, Linan-Thompson, & Hickman, 2003). Moreover, sustained effects of small-group interventions depend heavily on more efficient learning in general education classrooms.

Classroom management and student engagement can sometimes be improved dramatically by relatively inexpensive continuing education and relatively small changes in the classroom environment. We are impressed with a randomized control study by Kellam and associates in a large urban school district with high proportions of economically disadvantaged, minority, and

low-performing schools (Greer-Chase, Rhodes, & Kellam, 2002; Kellam, Mayer, Rebok, & Hawkins, 1998a; Kellam, Xiange, Merisca, Brown & Ialongo, 1998b). The relatively simple procedure was the Good Behavior Game (Barrish, Saunders, & Wolf, 1969) taught to teachers in one afternoon of continuing education with a half-day follow-up a few months later. Rates of disruptive and aggressive behaviors declined significantly in the experimental classrooms, engaged time increased, and effects on rates of aggressive behaviors for boys persisted through sixth grade.

The following four conclusions from Kellam et al. (1998a) are as accurate today as they were 10 years ago:

- "Teacher training typically does not provide effective methods and experience in classroom behavior management." (p. 182)
- "Teacher's skills at classroom management were then critical to children's socialization, particularly in the face of family poverty." (p. 182)
- "Boys from poverty environments may be particularly vulnerable to poorly managed classrooms." (p. 182)
- "The policy implications are [that] teachers colleges and in-service training need to include specific training in classroom behavior management as an important part of the socialization role of the classroom." (p. 182)

Classroom Management Innovation Configuration

A policy paper on classroom organization and behavior management was developed and presented in a policy research and practice brief (Oliver & Reschly, 2007). This innovation configuration appears in Table 2. Before describing its components, we wish to emphasize that engaging instruction at the student's skills levels, using a variety of methodologies, is a prerequisite to effective classroom management. Research literature clearly indicates, however, that good instruction, although necessary, is not sufficient to produce high achievement. Application of behavior strategies is an important second necessary component.

Each component in the Classroom Management Innovation Configuration is evidence based through support from multiple research findings. The seven key components are as follows:

- Structured Environment
- Active Supervision and Student Engagement
- Schoolwide Behavioral Expectations
- Classroom Rules
- Classroom Routines
- Encouragement of Appropriate Behavior
- Behavior Reduction Strategies

The Classroom Management Innovation Configuration components are derived from multiple research studies documenting the effectiveness of each. In the cells in the far left column of Table 2, the components are listed with descriptors. Following the descriptors are numbers keyed to research articles on the effectiveness of the component, which are listed in Appendix C. For example, in the left column cell of Active Supervision and Student Engagement, several references are listed. The number 10 denotes the 10th reference in Appendix C, an article by De Pry and Sugai that appeared in the *Journal of Behavioral Education.* Scoring procedures for the innovation configurations appear in Appendixes A and B.

Research on the Classroom Management Innovation Configuration

The Classroom Management Innovation Configuration was applied in the same evaluation study of the preparation of special education teachers in a large population state described in a previous section. The interjudge agreement was .86 for direct hits across two judges and .97 for adjacent number hits. The reliability is sufficient for evaluation studies and research on teacher preparation.

Results varied significantly across IHEs, most notably between implementation of proactive, preventive strategies and reactive strategies. The component of Behavior Reduction Strategies was implemented to at least some degree in all 27 teacher preparation programs, and 17 of the 27 provided what we rated as thorough instruction including supervised practice. In sharp contrast, the other six components were not implemented nearly as well or taught as thoroughly. For example, only three institutions implemented the Schoolwide Behavior Expectations component well, including thorough instruction and supervised practice. Similarly, fewer than half of the institutions appeared to be implementing adequately critical components such as Structured Environment, Active Supervision and Student Engagement, Classroom Rules, and Classroom Routines.

We have addressed the need for stronger preparation and improved skills in classroom management and interventions to reduce disruptive behavior by developing a research and policy brief (Oliver & Reschly, 2007). The Classroom Management Innovation Configuration has been used in the examination of several hundred teacher preparation course syllabi. Further revisions will be made as we obtain additional information from those using this tool. We have received very positive initial responses from personnel at the comprehensive regional resource centers regarding the potential use of this innovation configuration in improving state standards for the approval of teacher preparation programs.

Table 2. Classroom Management Innovation Configuration

	Code = 0	Code = 1	Code = 2	Code = 3	Code = 4	
Instructions: Place an X under the appropriate level of implementation score for each course syllabus that meets the criteria specified from 0 to 4. Score and rate each item separately. Descriptors and/or examples are bulleted below each of the components.	No evidence that the component is included in the class syllabus	Component is **mentioned** in class syllabus.	Syllabus mentioned component in class and required **readings and tests and/or quizzes**	Syllabus mentioned component in class, with readings, tests, and **assignments, projects for application** • Observations • Lesson plans • Clsrm modeling	Syllabus mentioned component in class, req rdg, tests, projects, assignments, **and teaching with application and feedback** • Fieldwork (practicum) • Tutoring	**Rating:** The rating in this column is the highest score for any syllabus on each of the respective components.
Structured Environment • A daily schedule is posted. • Environment is arranged for ease of flow of traffic and distractions minimized. (References: 2, 6, 18, 20, 21, 29, 30)						**Rating:**
Active Supervision and Student Engagement • Teacher scans, moves in unpredictable ways, and monitors student behavior. • Teacher uses more positive than negative teacher-student interactions. • Teacher provides high rates of opportunities for students to respond. • Teacher utilizes multiple observable ways to engage students (e.g., response cards, peer tutoring). (References: 3, 5, 7, 9, 10, 11, 17, 18, 19, 20, 21, 22, 23, 26, 27, 28)						**Rating:**
Column Subtotals:						

	Code = 0	Code = 1	Code = 2	Code = 3	Code = 4	
Instructions: Place an X under the appropriate level of implementation score for each course syllabus that meets the criteria specified from 0 to 4. Score and rate each item separately. Descriptors and/or examples are bulleted below each of the components.	No evidence that the component is included in the class syllabus	Component is **mentioned** in class syllabus.	Syllabus mentioned component in class and required **readings and tests and/or quizzes**	Syllabus mentioned component in class, with readings, tests, and **assignments, projects for application** • Observations • Lesson plans • Clsrm modeling • Journal response	Syllabus mentioned component in class, required reading, tests, projects, assignments, **and teaching with application and feedback** • Fieldwork (practicum) • Tutoring	**Rating:** The rating in this column is the highest score for any syllabus on each of the respective components.
Schoolwide Behavior Expectations • A few, positively stated behavioral expectations, posted, systematically taught, reinforced, and monitored (References:, 9, 10, 12, 13, 14,18, 19, 20, 21, 23, 25)						**Rating:**
Classroom Rules • A few, positively stated behavioral rules linked to schoolwide expectations • Posted, systematically taught, reinforced, and monitored (References:, 9, 10, 12, 13, 14,18, 19, 20, 21, 23, 25)						**Rating:**
Classroom Routines • Classroom routines are systematically taught, reinforced, and monitored within the context of the classroom (e.g., turning in homework, requesting assistance). (References:, 9, 10, 12, 13, 14,18, 19, 20, 21, 23, 25)						**Rating:**
Column Subtotals:						

	Code = 0	Code = 1	Code = 2	Code = 3	Code = 4	
Instructions: Place an X under the appropriate level of implementation score for each course syllabus that meets the criteria specified from 0 to 4. Score and rate each item separately. Descriptors and/or examples are bulleted below each of the components.	No evidence that the component is included in the class syllabus	Component is **mentioned** in class syllabus.	Syllabus mentioned component in class and required **readings and tests and/or quizzes**	Syllabus mentioned component in class, with readings, tests, **assignments, and projects** • Observations • Lesson plans • Clsrm modeling • Journal response	Syllabus mentioned component in class, req reading, tests, projects, assignments, **and teaching with application and feedback** • Fieldwork (practicum) • Tutoring	**Rating:** The rating in this column is the highest score for any syllabus on each of the respective components.
Encouragement of Appropriate Behavior • Procedures to acknowledge appropriate behavior at the group level (e.g., specific, contingent praise, tokens, activities, group contingencies, "Good Behavior Game") • Procedures to encourage appropriate behavior at individual student level (e.g., specific, contingent praise, behavior contracts) • Data collection on frequency of appropriate behavior within classroom environment (References: 1, 3, 4, 8, 9, 12, 14, 15, 16, 18, 20, 21, 23, 24, 26, 28, 31)						**Rating:**
Behavior Reduction Strategies • Antecedent strategies to prevent inappropriate behavior (e.g., precorrection, prompts, environment) • Multiple procedures to respond to behavior procedures to teach replacement behaviors and to reteach appropriate behavior (e.g., overcorrection) • Differential reinforcement (e.g., reinforcing other, competing behaviors) • Effective use of consequences (e.g., planned ignoring, time out from positive reinforcement, reinforcing around target student) (References: 1, 8, 9, 12, 15, 18, 20, 21, 23, 24, 26, 31)						**Rating:**
Column Subtotals:						
Column Totals (pp. 1–3):						

Inclusive Practices

The high priority attached to inclusive practices in which students with disabilities participate in the general education environment and curriculum is apparent from several sources. The President's Commission on Excellence in Special Education report (U.S. Department of Education Office of Special Education and Rehabilitative Services, 2002), *A New Era: Revitalizing Special Education for Children and Their Families*, emphasized that students with disabilities are first and always general education students. The high priority placed on fuller integration of students with disabilities in general education is a continuation of the well-established Least Restrictive Environment (LRE) principle from the Education of All Handicapped Children Act (1975). States and local districts vary enormously in the implementation of this principle (see U.S. Department of Education, Office of Special Education Programs, n.d.). Low implementation of LRE, that is, excessive segregation of students with disabilities outside of general education classrooms, diminishes opportunities for full participation in the general education curriculum and likely reduces educational outcomes.

Inclusive Practices Innovation Configuration

A draft of an Inclusive Practices Innovation Configuration appears in Table 3. The content for this innovation configuration comes from the literature on inclusive practices as well as two other Office of Special Education Programs-funded technical assistance and dissemination centers, the Center for Improving Teacher Quality (which can be accessed at www.ccsso.org/projects/) and the Center on Personnel Studies in Special Education (online at www.coe.ufl.edu/copsse/). Based on the literature and the work at these centers, we have developed a draft of what we hope is an approximation to a fully refined innovation configuration that can be used to improve teacher preparation and the availability of teachers with the competencies necessary to foster inclusive practices.

Training prospective general and special education teachers together in inclusive settings is valuable. However, additional work is needed on specifying the essential content and competencies for integrated general and special education teacher preparation. Absent determination of essential competencies in working with students with disabilities, inclusive programs are less likely to achieve success.

Our goal is the development of an innovation configuration that specifies the required content and experiences in teacher preparation coursework that improves collaboration among general and special education teachers and improves outcomes for students with disabilities in inclusive settings. The eight components currently emphasized in the Inclusive Practices Innovation Configuration are as follows:

- Inclusion
- Inclusive Services Models
- Collaborative Teaming/Planning
- Collaborative Skills
- Access to the General Education Curriculum: Universal Design for Learning

- Access to the General Education Curriculum: Differentiated Instruction
- Family Involvement
- Student Self-Determination and Collaboration

We seek comments and recommendations on these components. Suggestions for additional content and improved descriptors are most welcome (dan.reschly@vanderbilt.edu).

Research on the Inclusive Practices Innovation Configuration

A prior version of the Inclusive Practices Innovation Configuration was used in the study of IHEs' special education teacher preparation described in previous sections (Reschly et al., 2007). The interjudge agreement with this innovation configuration was .79 for direct matches and .92 for adjacent number matches. The result for direct matches was slightly below the usual criterion of >.80 reliability for evaluation studies. Further development of this tool to ensure more accurate interjudge agreement is anticipated. It should be noted, however, that the interjudge agreement was only slightly below the traditional criterion. The results that follow should be considered tentatively because further work on the content validity and reliability of the Inclusive Practices Innovation Configuration is needed.

The components of the Inclusive Practices Innovation Configuration were implemented reasonably well except for the Student Self-Determination and Collaboration component. Implementation of the other four components was done well by 22 to 25 of the 27 IHE institutions. In contrast, the Student Self-Determination and Collaboration component was implemented well in only 12 of the 27 institutions. These results are interesting, but tentative pending further development of the content validity and reliability of the Inclusive Practices Innovation Configuration.

Table 3. Inclusive Practices Innovation Configuration (Draft)

	Code = 0	Code = 1	Code = 2	Code = 3	Code = 4	
Instructions: Place an X under the appropriate variation implementation score for each course syllabus that meets the criteria specified from 0 to 4. Score and rate each item separately. Descriptors and/or examples are bulleted below each of the components.	No evidence that the concept is included in the class syllabus	Component is **mentioned** in class syllabus.	Syllabus mentioned component in class and required **readings and tests and/or quizzes**	Syllabus mentioned concept in class, with readings, tests, and **assignments, projects for application** • Observations • Lesson plans • Clsrm. modeling • Journal response	Syllabus mentioned concept in class, req. reading, tests, projects, assignments, **and teaching with application and feedback** • Fieldwork (practicum) • Tutoring	**Rating:** Rate each item as the number of the highest variation receiving an "X" under it.
Inclusion • Legal mandates and litigation • History/research • Social and moral underpinnings • Identified barriers and successful inclusive strategies • Participation in general education curriculum/assessments						**Rating**:
Inclusive Services Models • Educating students with disabilities in the general education setting • Alternative service delivery models (Resource, Consultant, Teaming and Collaborative, Co-Teaching) • Strategies to select an approach • Characteristics of inclusion: o School climates o Classrooms o Instructional programs						**Rating**:
Collaborative Teaming/Planning • Teaming involvement in the pre-referral, referral, & IEP process • Shared responsibility for the design, implementation, and assessment of instruction • Roles and responsibilities identified • Identification of available resources • Problem solving/data-based decision making • Evaluation of outcomes						**Rating**:
Column Subtotals:						

Collaborative Skills • Foster staff interactions • Trust-building strategies • Conflict resolution/problem solving						**Rating:**
Access to the General Education Curriculum: Universal Design for Learning • Familiarity with the scope and sequence of the content and standards • Determining curricular goals for all students • Linking IEP goals and objectives to general curriculum • Technological applications: o Computer-assisted instruction o Technology as a learning accommodation (e.g., text-to-speech software) o Technology as a tool to modify instruction o Technology as a resource for project-based learning o Determining assistive technology needs • Adaptations to: input, output, size, time, difficulty, level of support, degree of participation						**Rating**:
Access to the General Education Curriculum: Differentiated Instruction • Knowing your students (interest, prior knowledge, strategic abilities, and acquired skills) • Determining curricular modifications (content, process, and/or products) • Linking IEP goals and objectives to general curriculum • Adaptations to: input, output, size, time, difficulty, level of support, degree of participation						**Rating:**
Instructional Strategies **Positive Behavioral Supports** **Scientifically Based Reading Instruction**	Please see the Innovation Configurations on Classroom Organization and Behavior Management, Scientifically Based Reading Instruction, and Learning Strategies					
Column Subtotals:						

Family Involvement • Role of the family in the collaborative process (e.g., IEP development) • Developing partnerships with families • Communication skills for working with families • Assisting diverse families						**Rating:**
Student Self-Determination and Collaboration • Classroom is student centered and students are partners in learning. • Explicit instructional techniques for fostering student independence and self-determination (student self-monitoring and management skills) • Explicit instructional techniques for fostering positive peer relationships and self-advocacy						**Rating:**
Column Subtotals:						
Column Totals (pp. 1–3):						

Summary

The Reading, Classroom Management, and Inclusive Practices Innovation Configurations are designed as tools to assist professional associations, states, teacher preparation programs, local districts, and individuals in their efforts to improve educational results for students with disabilities and at-risk characteristics. The content of the innovation configurations is deeply embedded in NCLB and IDEA policy. The content of the Reading and Classroom Management Innovation Configurations are strongly supported by research on evidence-based practices. Although less researched, the components of the Inclusive Practices Innovation Configuration are supported by some evidence as well as endorsed in policy and modern conceptions of appropriate programs for students with disabilities. NCLB, IDEA, and the nation have invested significant resources in the development, dissemination, and implementation of evidence-based instruction. Gains have been made in implementation of essential evidence-based practices, and some evidence suggests that although results for underachieving groups are improving, large gaps remain. However, significant changes still are needed in professional association standards, teacher preparation and continuing education, and state standards to achieve the full promise of evidence-based instruction.

The innovation configurations developed at Vanderbilt University are designed to close gaps between what is known about evidence-based instruction and what is implemented in classrooms throughout the United States. Evidence-based instruction continues as the most promising of the available alternatives for improving results and reducing achievement gaps between groups.

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Appendix A
Explanations of Levels of Implementation

The innovation configuration tables specify five levels or degrees of implementation with scores varying from 0 to 4. The levels are structured so that with each increase in score, the criterion increases in complexity related to the evidence that the syllabus has demonstrated depth of instruction for a given component. In other words, merely mentioning the reading element in class or on the syllabus is a lower level of implementation than having required readings in addition to discussing the component. Likewise, application with feedback, in addition to the lower levels of implementation, would be considered the highest level of evidence that a component has been sufficiently covered in the course syllabus. Examples of each level are provided below.

Code 0 **No Evidence** that the component is included in syllabus
If no evidence of a component can be found in the course syllabus (e.g., phonics instruction, fluency instruction) including course objectives, lectures, discussions, reading or assignments, a score of zero would be appropriate (and an "X" could be marked under zero for that component)
Code 1 Syllabus **mentions** component by listing it anywhere on syllabus (e.g., explicit instruction, vocabulary, phonemic awareness, etc.).
Exact wording for each bulleted item is not necessary to score a 1 for mentioning the component. If a component is listed as a topic item for lecture and discussion (e.g., phonics instruction) or listed as an outcome or course objective (e.g., "students will learn how to instruct phonics"), then an "X" may be placed under this variation.
Code 2 Syllabus mentions the component, requires **readings and tests and or quizzes** (at least two, either textbooks or journal articles, comprehensive quizzes/tests).
The score 2 is given if the course syllabus mentions a component as part of the lectures, discussions, or course objectives and also requires readings on the topic and/or tests/quizzes. Evidence of readings include textbooks (e.g., "Read Chapter 2—Phonics Instruction") or journal articles (e.g., Olinghouse, N.G., Lambert, W., & Compton, D. L. (2006). Monitoring children with reading disabilities' response to phonics intervention: Are there differences between intervention aligned and general skill progress monitoring assessments? *Exceptional Children, 73*(1), 90–107.) Evidence of tests may include "Test 2 will cover Lectures 15–25." Note: Phonics instruction must be mentioned under Lectures 15–25.
Code 3 Syllabus mentions the component, requires readings and tests and/or quizzes, and an **application assignment or project for application is required.**
In order to score a 3, a course syllabus must mention a component, required readings, tests/quizzes, and also have either an assignment (e.g., "Write a one-page reaction paper explaining why it is important to teach phonics as a reading strategy")or project (e.g., "Create a phonics lesson plan").
Code 4 Syllabus mentions the component, has assignments, project, or tests and **application with feedback** related to the component through student practicum/internship/tutoring activities.
A course syllabus might list application with feedback or student teaching as a general requirement. However, in order to earn a score at this level, the syllabus must link the application with experience plus feedback with the specific component. (e.g., "Students will be required to practice skills related to teaching phonics as a reading strategy. Direct observations by instructor/supervisor will be applied toward the total course grade.")

Appendix B
Instructions for Scoring Syllabi With the Innovation Configurations

Step 1: One innovation configuration should be used for scoring each teacher preparation program. After reviewing a course syllabus, an "X" should be placed under the appropriate level of implementation for each component. Bulleted items are provided as a guide to describe the broad category in greater detail and should be viewed as examples or descriptors of each item. Please refer to the examples outlined in Appendix A for more details and examples regarding the levels of implementation.

Step 2: Each item should be given an overall rating based on the highest level of implementation. Overall ratings are marked in the last column on the right under "Rating." For example, if under "Phonics" the highest level of implementation was for mentioning the component, then a rating of **1** is appropriate for that course syllabus under the component of phonics.

Step 3: If more than one syllabus is rated on the form, the number of "X's" for each level should be totaled in each column under levels 0–4.

Step 4: Transfer the highest ratings from each level for each bulleted item over to the IHE master scoring sheet. If computing a comprehensive university score, record the highest level of implementation score across submitted syllabi.

Caution in interpreting the innovation configuration scores should be exercised. The scores are on an ordinal scale, meaning that high scores can be interpreted as more and less scores less of some feature; however, the intervals from number to number are not necessarily equal, nor can scores be interpreted as ratios. For example, a score of **4** indicates a higher level of implementation than a score of **2**, but it does not indicate twice as much or even two equal units more.

Appendix C
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Classroom Management Innovation Configuration

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