

ISEC2010

Inclusive and Supportive Education Congress: Promoting Diversity and Inclusive Practice

Queen's University, Belfast

***The IRIS Center for Training Enhancements: Providing Online Instructional Resources about Students with Special Needs***

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The Inclusive and Supportive Education Congress 2010 (ISEC2010) presentation is a hands-on workshop. The session provides demonstration and practice with The IRIS Center's Web site and its collection of barrier-free instructional resources about inclusive instructional practices. The Center's instructional assets are designed for use in both college and university courses and professional development experiences. The content focuses on effective strategies to use with both struggling learners and those with special needs. The ISEC2010 hands-on workshop provides participants with an overview of IRIS modules, case studies, activities, resource locator, online dictionary, search tools, podcasts and tutorials, and other supporting materials.

**Overview**

The IRIS (IDEA '04 – the special education law in the U.S. for students with special needs -- and Research for Inclusive Settings) Center for Training Enhancements develops and provides a variety of instructional resources for use by college and university faculty and professional development providers. The over-arching purpose of The Center is to promote current research findings about instructional practices effective with special needs students. Particular attention focuses on use of the IRIS resources in the preparation of new teachers and in upgrading the skills of practicing educators through professional development activities. The IRIS modules are challenge-based, interactive, technology-driven instructional units on discrete topics (e.g., perception of disabilities, peer tutoring, universal design for learning, assistive technology, curriculum based measurement, high stakes testing, functional behavior assessment). The Center's case studies and activities are problem-based. These materials, available in English with many also produced in Spanish, are used worldwide in the preparation of current and future school personnel so they may work more effectively in inclusive educational settings. The Center, funded by the U.S. Department of Education's Office of Special Education Programs (OSEP; Project Number H325F07003), provides its *barrier-free* resources *at no cost* through the IRIS Web site: [www.iriscenter.com](http://www.iriscenter.com). The materials are organized by topics: accommodations; assessment; assistive technology; behavior and classroom management; collaboration; differentiated instruction; disability; diversity; learning strategies; math; reading, language arts, and literacy; response to intervention, and school improvement.

**Grounded Through Research**

All of the IRIS Center's resources are thoroughly tested through a variety of research

methods. Specific topics for resources are selected by determining gaps in practicing professionals' knowledge and skills by implementing a comprehensive needs-assessment process. One part of the process includes focus groups of stakeholders (e.g., practicing education professionals, college and university faculty, representatives from professional organizations, parents). Then, their input is compared to content analyses of information presented in textbooks and other materials used to prepare the next generation of general and upgrade the skills of teachers and school leaders.

Learning sciences theory about adult learning is applied in the development of IRIS modules. The modules bring current research about effective practices to users. After they are produced, the modules are tested in many ways to determine their effectiveness. They are field-tested to ensure clarity of content, usefulness, and quality. In addition, the modules' effectiveness has been proven effective through learning outcomes research. Brief discussions of these methods of validation are described next.

**The learning science framework.** The IRIS Center's signature materials are its challenge-based, online modules. Grounded in learning theory, these interactive modules apply the How People Learn (HPL) theory developed by John Bransford (University of Washington, Seattle) and his colleagues and are based on learning science research (Bransford, Brown, & Cocking, 2000, 2008; Donovan & Bransford, 2005). The modules are designed to help users understand differentiating instruction and classroom management for struggling



To begin this module, click on the Challenge button in the graphic above.

Figure 1. The *STAR Legacy Cycle*.

learners, including those with special needs. Each module follows the HPL pattern, The *STAR Legacy Cycle Framework*, shown in the accompanying illustration (see Figure 1). The instructional organization was outlined by Bransford and integrates technology into the learning environment (Bransford, 2006, 2009). Every module begins with a realistic “challenge” intended to capture the user’s attention. The “thoughts questions” that follow allow users to explore and consider what they currently know about the scenario presented in the challenge. Then, in “perspectives and resources” sections, users draw on nuggets of information (e.g., audio interviews, movies, activities, and text) in order to actively engage in learning the modules’ main content. Next, in the “assessment” component, users gauge their learning, before moving to the “wrap up” or summary to review the module’s content.

**Research-based practices.** All content of The Center’s instructional resources centers on validated practices. First, the content of the modules is developed through a collaborative process with the researchers who developed the instructional methods. These researchers work closely with content developers at Vanderbilt University to ensure fidelity of translating research findings into instructional units.

As an example of the developmental process, Lynn Fuchs, Doug Fuchs, and Sharon

Vaughn worked with the Vanderbilt team to create content for a series of modules about supporting struggling readers and preventing reading problems. These researchers were instrumental in setting the foundation for the response to intervention (RTI) movement, which is gaining popularity in the U.S. (Fuchs, Fuchs, & Vaughn, 2008). Content for the RTI series of modules, case studies, and activities about RTI was planned collaboratively with these researchers, developed by the Vanderbilt team with their guidance, and supported through advice and testimonials of practitioners who use these methods. A comprehensive review process ensures accuracy before the module is produced and then posted on The Center's Web site.

This same process was used for the creation and production of all the IRIS modules and case studies. The behavior and classroom management series stem from the researched based practices validated by Michael Rosenberg (Rosenberg & Jackman, 2003), Caroline Evertson (Evertson & Emmer, 2008), Kathleen Lane (Lane, Kalberg, Bruhn, Mahoney, & Driscoll, 2008; Lane & Wehby, 2002), and Joe Wehby (Wehby & Lane, 2009). These scholars are some of the best-known and well-respected researchers in this area in the U.S.

**Field-testing of modules.** Once the modules are developed and produced, they are field tested to determine consumers' satisfaction. In all cases, the materials are rated highly effective. Students and practicing teachers using the resources report that they feel they "learned a lot" and benefitted from the instruction presented. Most users indicate that they prefer this mode of content presentation to standard textbooks and print-manuals (Smith, Pion, Skow, Tyler, Yzquierdo, Brown, & Givner, 2005). Instructors report they believe their students "learned the content well." In separate surveys about the usefulness, relevance, and quality of these resources, the IRIS materials are consistently ranked outstanding.

**IRIS learning outcomes research.** In addition, the actual effectiveness of the modular approach was tested through a controlled research study. Through a tightly designed learner-outcomes design, the strength of learning content was proven effective at the .001 levels of significance when compared to learning from a textbook, instructor's lectures, and the IRIS module (The IRIS Center, 2009a; Smith et al., 2005). The study was conducted in three, large introduction to special education college courses for students *not* majoring in special education. Learners' outcomes were superior when using the IRIS modules (see Figure 2). Similar results were found in a quasi-replication study (The IRIS Center, 2009b). In this effort, however, it was also found that use of the modules when assigned as "homework," produced learning outcomes at a level comparable to those produced when the modules were integrated into face-to-face classroom instruction. These results provide confidence in using the IRIS modules in distance delivery experiences, as well as in traditional college coursework when assigned as "homework."

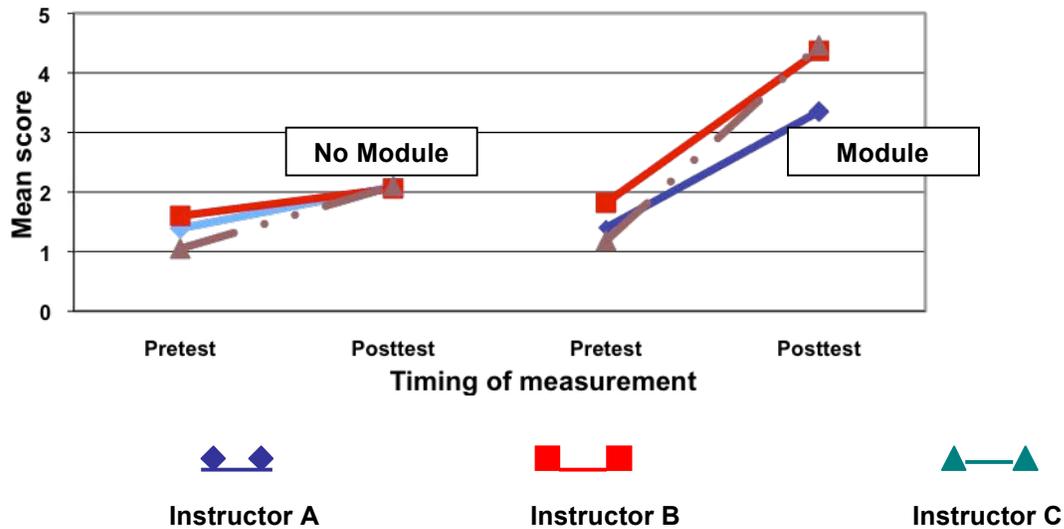


Figure 2. Learner Outcomes' Pretest and Posttest Means

**Use of IRIS resources.** Finally, another test of popularity of this method of instruction for adults rests with the use of these resources. In the calendar year of 2009, 704,526 visitors accessed resources from The IRIS Center's Web site (see Table 1). This usage represents a growth of some 500,000 visitors when compared to the annual use in the 2005 calendar year. While those who access these resources come primarily from the United States, other top ranked nations include: Singapore, Canada, Mexico, China, Spain, Philippines Australia, Chile, Iran, and Japan. Figure 3 shows the use of the IRIS Web site for non-U.S. nations in 2009.

2005	207,705
2006	499,567
2007	580,334
2008	617,515
2009	704,526

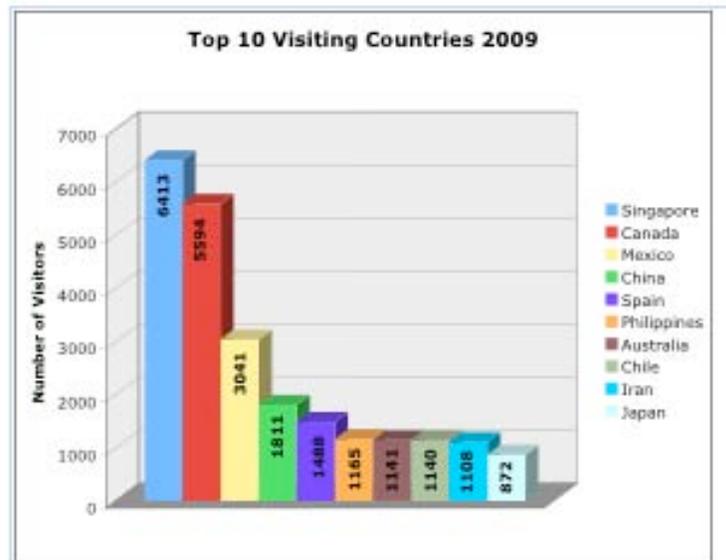


Figure 3. Countries use of the IRIS Website in the 2009 calendar year, not including those from the U.S.

**Demand for New Preparation Efforts**

The time is now because the need is great for new approaches to the preparation of teachers and other education professionals for work in inclusive settings. Consistently for decades, teachers, principals, and other school leaders report that they feel ill prepared to meet the learning needs of diverse and struggling students. Regardless, the number of these students attending general education classes increases each year. At the same time, the knowledge base about effective instructional practices is expanding at an exponential rate, and more efficient instructional methods for teacher preparation and professional development are available.

**Increased inclusion.** In Europe, the U.S., and elsewhere across the world, more students who struggle with the standard curriculum attend neighborhood schools and learn alongside their classmates who do not face learning challenges (Florian, 2009). In the U.S., over 80% of all students with disabilities receive almost all of their education in inclusive general education settings (U.S. Department of Education, 2009). Many other countries report higher rates of inclusion (Florian, 2009). The imperative is clear: All educators must be prepared to meet the educational needs of all students.

**Need for better-prepared educators.** A continually expanding knowledge base documents how well trained teachers can and do make real differences in the lives and the educational achievement of their students (Darling-Hammond, 2005, 2006a, 2006b; Futernick 2007, West & Whitby, 2008). The U.S. special education law (PL 94-145, Education for All Handicapped Children's Act [EHA]) was first passed in 1972. Unfortunately, despite a 40-year educational history in the U.S. – first mainstreaming, then integration, and now inclusion – teachers' perceptions have changed very little. General education teachers in the U.S., like their colleagues internationally, express concerns that they are not prepared to accept responsibilities associated with the education of students with special needs (Chopra, 2009; Futernick, 2007). However, we believe these situations can be addressed, resulting in many positive outcomes. Benefits of well-prepared teachers are many. For example, they receive positive evaluations from their principals (Futernick, 2007), are happy with their career choices, and are less likely to leave the profession during their early career years (McLeskey & Billingsley, 2008).

These challenges have increased as the requirements to adhere to a standards-based accountability system, implement evidence-based practices and curricula, and ensure the delivery of highly effective instruction to all students. Such requirements have brought doubts to many teachers and principals, who are not always confident that they can meet expectations of providing a responsive education to all of their students (Burns & Ysseldyke, 2009; Cook, Tankersley, & Landrum, 2009). According to the National Comprehensive Center for Teacher Quality (NCCTQ), new teachers, in particular, report that they feel unprepared to work with students in their classes with special needs (Holdheide & Reschly, 2008). And yet most acknowledge that principals, collaborative teachers, and special educators make a difference in the acceptance, supports, accommodations, and differentiated instruction provided to all students (Cook, Cameron, & Tankersley, 2007; Sheperd & Hazasi, 2006). Meeting these challenges will require the

embedding new content about highly effective practices into the preparation courses and activities for both new and practicing educators.

**Online training enhancements.** For truly supportive and responsive educational environments to be achieved the next generation of educators must be prepared better and differently than their predecessors. Also, practicing professionals must have their skills continually upgraded. Two barriers must be overcome: 1) adding content to an already overloaded curriculum and 2) lack of access to up-to-date instructional resources about effective practices. We believe The IRIS Center's Web-based resources provide solutions to these barriers.

The incorporation of technology into personnel preparation may address the problem of overloaded curricula, but it has other advantages as well. For example, technology fits the different learning styles and preferences of many of today's students, a group often referred to as "digital natives" (Bore, 2008; Nicoletti & Merriman, 2007). Technology has been shown to foster students' collaboration and communication (Frey, 2009), ensure consistent presentation of important content (Bullock, Gable, & Mohr, 2008), allow for on-demand access to instruction, and flexible scheduling (Association for Supervision and Curriculum Development [ASCD], 2009). College students tend to prefer technology-based instruction because of its potential for flexibility, responsiveness, and interactivity with content (Bullock, Gable, & Mohrk, 2008).

In the U.S., the federal government recognized these challenges and possible solutions. Through the U.S. Department of Education's Office of Special Education Programs, it initiated a national response by investing in a center to provide teacher educators and professional development providers with resources on demand. It funded The IRIS Center for Training Enhancements (OSEP Project Number H325F010003). The Center has the unique mission of providing a rich collection of resources across a range of topics aimed at translating research into practice. These resources are available *free* to users worldwide through its Web site: [www.iriscenter.com](http://www.iriscenter.com). They utilize the advantages of technology. They provide teachers in training and practicing professionals with cutting edge information about how to improve the results of struggling learners, especially those with special needs, who are learning in inclusive educational settings.

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