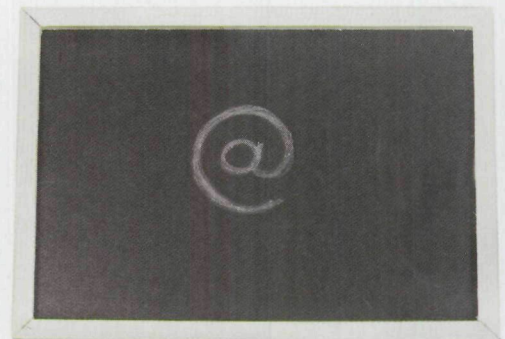


Supporting New Special Education Teachers

*How Online Resources
and Web 2.0 Technologies
Can Help*

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Jane

Jane sat down exhausted after another long day. It was just the first week of November, but it felt as if the school year had been in session for months. She expected her first year to be tough but having nearly 30 children with disabilities, including, it seemed, every categorical disability, on her caseload just seemed to be beyond her initial expectations. Back in early September working with fourth-, fifth-, and sixth-grade students seemed reasonable. Because she was new, the district assigned her a general education sixth-grade teacher to serve as a mentor to "show her the ropes." Although they didn't have common planning periods or lunch schedules, the first couple of weeks did offer a few times to meet. However, since mid-September, she had not been able to talk with her mentor, and Jane often felt lost about where to find information. Her primary-grade special education colleague, Susan, was a second-year teacher with two young children at home. Susan meant well, but being new to the field and building, Susan had as many questions as Jane did.

Althea

Althea wanted to scream. Hunter, one of her students who she considered challenging, had once again disrupted the class, the activity, and the very lesson she had worked so hard to develop and implement. She knew as a first-year teacher there would be difficult days; however, the challenging days appeared to be increasingly outnumbering the "successful" ones. Behavior management was a top priority and something her mentor supported during the initial weeks of school. As the year progressed, student behavior continued to present challenges; however, access to resources, including her mentor, had been limited. Althea loves her students and the curriculum content, but finds the behavior and discipline issues to be frustrating, time consuming, and taking a mental and physical toll on her energies.

Juan

Juan, a new high school teacher in an urban school and a classmate of Jane's during their undergraduate years loves his students and found the work engaging and rewarding. However, the district special education supervisor was planning to adopt a response-to-intervention (RTI) model and sought Juan's help to expand RTI from the elementary schools to one high school subject area to provide a model of how it might work. Juan was familiar with the basic approach but working with general education teachers and building administration to implement RTI was beyond his skill level and pay grade. Juan's colleagues did not seem interested in adopting a tiered-based approach in a content-based environment. Juan wondered where he might find information on RTI at the secondary level and how he should proceed.



New special education teachers (SETs) like Jane, Althea, and Juan face some typical challenges as well as ones that are specific to their particular work settings. Providing support that addresses teachers' unique needs is important for increasing their effectiveness, helping them make a smooth entry into teaching, and reducing their stress and turnover. Nearly 20 years ago, the first studies of new SETs were published

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with a focus on their needs (e.g., Billingsley & Tomchin, 1992; Kilgore & Griffin, 1998) and mentor programs of support (e.g., Whitaker, 2000). More recently, conceptualizations of induction have broadened to include online professional communities of practice (CoP; Farooq, Shank, Harris, Fusco, & Schlager, 2007) and numerous online resources have been developed to support teachers, including Web 2.0 technologies (Smith & Israel, 2010). This article considers high quality online resources that can be used by new teachers and incorporated into traditional mentor programs or virtual systems of support. In addition, emerging opportunities to further new teacher support via Web 2.0 environments are discussed.

Connecting New Teachers to Online Resources

New teachers often struggle and research is increasingly showing that the challenges new teachers face are consistent across buildings, districts, and even states. For example, in a survey of SETs in several states, White and Mason (2006) found that many new teachers needed assistance with paperwork and IEPs (84%); referral, placement, and evaluation (75%); materials (70%); behavior management (60%); getting acclimated to the school (66%); instructional strategies (58%); assessments (54%); collaboration with general educators (54%); parent-family conferences (48%); and

learning/using the curriculum (46%). Although mentors, colleagues, and professional development programs are excellent sources of support for new SETs, research increasingly shows the need for resources that explicitly discuss effective instructional practices. In addition, instructional and behavioral solutions that are immediately applicable are sought by new teachers trying to prepare for tomorrow's class.

Finding up-to-date resources can be time consuming for new teachers and their mentors and when found, some materials are quite expensive. Fortunately, excellent online resources exist that provide mentors and mentees with easily accessible material relevant to many aspects of teachers' work. Table 1 provides examples of current, high-quality web sites that incorporate resources specific to using evidence-based instructional practices including teacher tools, methods for creating universally designed instruction, and disability-specific resources. Given that new teachers' work contexts and demands vary from school to school, mentors and mentees need to carefully select from the resources in Table 1 to avoid overwhelming new SETs.

Although not necessarily designed for collaborative work, these resources can be easily integrated into traditional, e-mentoring, and online communities of practice. That is, these materials are available for use at any time in a format suitable for an early career teacher seeking to solve a problem in his or her classroom. In Table 1, we link specific online resources to the documented needs of new teachers. Although the highlighted resources are not meant to be an exhaustive list, they do provide examples of web-based resources that were designed, developed, and tested for preservice and professional development purposes. For example, Vanderbilt University's IRIS site and the University of Kansas'

Special Connections are high-quality web-based resources developed to enhance access to evidence-based practices for general and special education teachers seeking to meet the instructional and behavioral needs of students, specifically those with disabilities. To better examine and understand these and other online resources, we organized content into six categories based on a recent review of 18 studies of new teachers' concerns (see Billingsley, Griffin, Smith, Kamman & Israel, 2009). Across these qualitative and quantitative studies, new SETs reported concerns about (a) content knowledge and standards, (b) effective instruction, (c) assessment, (d) behavior management, (e) collaboration with others, and (f) managing the job and dealing with stress. Table 1 summarizes what is known about new SETs' needs across these six areas and identifies specific online resources that might be used by new teachers and/or their mentors in each of these areas. Our goal is to help "connect the dots" of what currently exists while also reinforcing what is possible through e-mentoring and online CoP as we continue to seek ways to support special education teachers during the critical induction years.

Content Knowledge and Standards

New SETs have extensive curriculum responsibilities that may exceed those of general educators (Kilgore, Griffin, Otis-Wilborn, & Winn, 2003) and many work across multiple content areas and grade levels. Unfortunately, some SETs have minimal preparation in the content areas they are assigned to teach, leaving them with the additional task of not only teaching the material, but learning it as well. A new SET, for example, was surprised that she was required to teach government, social studies, and science and reported she was "learning the material with my students" (Otis-Wilborn, Winn, Griffin, & Kilgore, 2005, p. 145). Gehrke and McCoy (2007) also reported that new SETs spent time outside of school learning content standards so they could link curriculum, IEP goals,

Table 1. Specific Online Resources Aligned With New SETs' Learning Needs

New Teachers' Learning Needs	Examples of Web Resources
Content Knowledge & Standards	
IRIS Modules & Case Studies http://iris.peabody.vanderbilt.edu/resources.html	<ul style="list-style-type: none"> • CSR: A Reading Comprehensive Strategy • PALS: A Reading Strategy for High School • Improving Writing Performance: A Strategy for Writing Expository Essays • Applying Learning Strategies to Beginning Algebra (Part 1) • Cultural and Linguistic Differences: What Teachers Should Know • Teaching and Learning in New Mexico: Considerations for Diverse Student Populations
LD OnLine http://www.ldonline.org	<ul style="list-style-type: none"> • The Clarifying Routine: Elaborating Vocabulary Instruction • Vocabulary Assessment and Instruction
Special Connections http://www.specialconnections.ku.edu	<ul style="list-style-type: none"> • Strategies for Accessing the Science Curriculum for Special Needs Students • Strategies for Accessing the Social Studies Curriculum for Special Needs Students
Effective Instruction	
CAST http://cast.org	<ul style="list-style-type: none"> • Universal Design for Instruction resources
4Teachers.org http://www.4teachers.org	<ul style="list-style-type: none"> • Assistive technology web resources
IRIS Modules http://iris.peabody.vanderbilt.edu/resources.html	<ul style="list-style-type: none"> • Differentiated Instruction Module • Five RTI modules
National Center for Response to Intervention www.rti4success.org	<ul style="list-style-type: none"> • RTI in middle schools webinar
Special Connections http://www.specialconnections.ku.edu	<ul style="list-style-type: none"> • Direct Instruction • Universal Design for Instruction • Instructional Accommodations
Assessment	
Intervention Central www.interventioncentral.org	<ul style="list-style-type: none"> • CBM Warehouse
IRIS Modules http://iris.peabody.vanderbilt.edu/resources.html	<ul style="list-style-type: none"> • Classroom Assessment (Part 1): An Introduction to Monitoring Academic Achievement in the Classroom • Classroom Assessment (Part 2): Evaluating Reading Progress
National Center for Response to Intervention www.rti4success.org	<ul style="list-style-type: none"> • Introduction: CBM for Progress Monitoring • Using CBM for Progress Monitoring in Reading • Using CBM for Progress Monitoring in Math • Using CBM for Progress Monitoring in Writing and Spelling • Using CBM to Determine Response to Instruction
Special Connections http://www.specialconnections.ku.edu	<ul style="list-style-type: none"> • Curriculum-Based Measurement • Data-Based Decision Making • Quality Test Construction • Grading • Assessment Accommodations
4Teachers http://www.4teachers.org	<ul style="list-style-type: none"> • RubiStar for quality rubrics • QuizStar for online quizzes • Assessment web resources (e.g., for managing assessments, alternate assessments, authentic assessments, portfolios)

continues

Table 1. Continued

New Teachers' Learning Needs	Examples of Web Resources
Behavior Management	
IRIS http://iris.peabody.vanderbilt.edu/resources.html	<ul style="list-style-type: none"> • Who's in Charge? Developing a Comprehensive Behavior Management System • You're in Charge! Developing Your Own Comprehensive Behavior Management Plan • Addressing Disruptive and Noncompliant Behaviors (Part 1): Understanding the Acting-Out Cycle • Addressing Disruptive and Noncompliant Behaviors (Part 2): Behavioral Interventions
Special Connections http://www.specialconnections.ku.edu	<ul style="list-style-type: none"> • Functional Behavior Assessment • Positive Behavior Support Planning • Positive Behavior Support Interventions • Classroom and Group Support
Collaboration With Others	
Beach Center on Disability http://www.beachcenter.org	<ul style="list-style-type: none"> • Family-related resources
IRIS http://iris.peabody.vanderbilt.edu/resources.html	<ul style="list-style-type: none"> • Collaborating With Families
Special Connections http://www.specialconnections.ku.edu	<ul style="list-style-type: none"> • An Introduction to Cooperative Teaching • Keys to Successful Paraeducator Supervision
Managing the Job & Dealing With Stress	
Council for Exceptional Children (CEC) http://cec.sped.org	<ul style="list-style-type: none"> • Reality 101: CEC's blog for new teachers
IRIS http://iris.peabody.vanderbilt.edu/resources.html	<ul style="list-style-type: none"> • The Pre-Referral Process: Procedures for Supporting Students With Academic and Behavioral Concerns • Supporting Beginning Special Educators: Tips for School Leaders
Special Connections http://www.specialconnections.ku.edu	<ul style="list-style-type: none"> • Creating a Schedule

Note. SET = special education teacher; LD = learning disability; RTI = response to intervention; CBM = curriculum-based management.

and instruction with the required standards and their students' abilities. Table 1 identifies specific resources that address specific content areas (e.g., reading, mathematics, social studies) as well as resources that may be used to design a standards-based curriculum and accompanying lessons. For example, *Applying Learning Strategies to Beginning Algebra (Part 1; IRIS)* and *Strategies for Accessing the Science Curriculum (Special Connections [SC])* provide specific guidance on instruction, resources, and materials for teaching middle and high school students with disabilities. Here, early career teachers have access to

content designed for the practicing teacher offering tools and steps to integrate the content in one's class. For example, both IRIS and SC adopt a professional development model (e.g., STAR Legacy Module, case-based instruction) that seeks to enhance understanding and application by practicing teachers. The resource, LD OnLine, has a variety of material to assist teachers, students, and parents (e.g., vocabulary, study skills, and mathematics).

Effective Instruction

Recent evidence suggests that new SETs' instructional practices have a

significant impact on student achievement in reading (Brownell et al., 2009), and it is expected that their practices affect all areas of the curriculum. A major goal of induction programs is helping new teachers learn and use effective instructional practices. The cast.org web site provides teachers with a range of tools for creating lessons that allow students with disabilities to access general education. New SETs may find that general educators are interested in this resource as well. More specifically, several broad areas need to be considered in developing strong instructional programs including: managing the

classroom environment, planning and preparation, and instruction. Available resources include the *Differentiated Instruction Module* (IRIS) that addresses important elements of systematic instruction such as the role of modeling, scaffolding, ample practice opportunities, and immediate corrective feedback. The IRIS site also includes a five-part module series on RTI as well as additional modules on progress monitoring. The module *RTI (Part 5): A Closer Look at Tier 3* provides in-depth analyses about providing intensive instruction. Special Connections also includes a range of instructional resources for using Direct Instruction (DI), Universal Design for Instruction (UDI), and Instructional Accommodations across teaching reading, written language, and mathematics. In addition, these web sites include resources for teaching students at the elementary and high school levels (SC and IRIS) and providing culturally relevant reading instruction and working with English Language Learners (IRIS).

Assessment

The current policy context (NCLB, 2001) requires attention to standards-based assessment. Recent studies of new teachers suggest they need assistance in addressing the assessment requirements of No Child Left Behind (Gehrke & Murri, 2006). Special educators may have responsibilities for a range of assessment activities, assisting with RTI and other performance-based measures. The IRIS module, *Accountability: High-stakes Testing for Students with Disabilities* and the module, *RTI (Part 2): Assessment* describe in detail the assessment procedures that are part of RTI, how to use progress monitoring data to determine if a student is meeting performance criteria, and how to determine if additional intensive interventions are needed. Special Connections also incorporates other assessment-related resources related to RTI, curriculum-based assessment, and grading. In addition, 4teachers.org includes numerous assessment tools (e.g., rubrics, quiz generators).

Behavior Management

Struggles with discipline are one of the most frequently mentioned concerns for new general education teachers (GETs) and SETs (Billingsley et al., 2009). New SETs described a range of problems including getting student behavior under control and dealing with power struggles (Billingsley et al., 2009; Griffin, Winn, Otis-Wilborn, & Kilgore, 2003). As a new teacher stated, "How do you not let a few people spoil a lesson? I'm not sure how to do it" (Kilgore et al., 2003, p. 41). LD OnLine has numerous resources for classroom and behavior management. Both IRIS and SC provide high-quality content on developing comprehensive behavior managing systems, addressing disruptive and noncompliant behaviors, and using functional behavioral assessment and positive behavioral supports. For example, SC features an entire section on behavior plans featuring four distinct modules.

Collaboration

Another major area in which new SETs struggle is in establishing positive collaborative relationships with teachers, families, and paraprofessionals. New SETs inevitably face a range of barriers as they work to include students with disabilities in inclusive settings (Gehrke & McCoy, 2007), establish expectations with paraprofessionals, work with parents from diverse backgrounds, and establish positive working relationships with parents (Billingsley et al., 2009). As one new teacher stated, "I feel like I could have used a class like that . . . dealing with other people . . . [It's been] very, very difficult with older adults." (Gehrke & Murri, 2006, p. 184). SC resources include *An Introduction to Cooperative Teaching* with research, teacher tools, and suggestions for working with general educators. There is also guidance for teachers in supervising paraprofessionals, with concrete suggestions under *Keys to Successful Paraeducator Supervision*, as well as information on training paraeducators. Special educators will also find helpful resources for collaborating effectively with families through the beachcenter.org. The IRIS

module, *Collaborating With Families* (IRIS) provides information about working with families from diverse backgrounds.

Managing the Job and Dealing With Stress

New SETs often struggle to manage and organize various aspects of their work (e.g., individualized education programs [IEPs], schedules, paperwork, compliance with special education regulations) and cope with stress (Boyer & Lee, 2001). Providing teachers with specific tools for managing and coping with their jobs are critical aspects of support. New SETs often have questions about legal issues, IEPs, and evaluation processes. In addition to learning district procedures, SETs can access web sites such as NICHCY for a wealth of information about the legal requirements in special education. *Creating a Schedule* (SC) and *The Pre-Referral Process: Procedures for Supporting Students with Academic and Behavioral Concerns* (IRIS) provide new SETs with ideas about addressing some of these practical concerns. A blog, *Reality 101*, sponsored by the Council for Exceptional Children (CEC) provides opportunities for new SETs to see what other teachers are doing and receive advice about many aspects of the job including budgets, managing stress, and planning. Another IRIS module, *Supporting Beginning Special Educators: Tips for School Leaders* has information relevant to understanding new SETs and their concerns and provides ways of supporting them. By understanding areas in which new teachers struggle, mentors should be better able to understand how to support them, and new SETs may realize that they are not alone in their concerns.

Overview of What Web and Web 2.0 Technologies Offer New Teachers

The previous information emphasizes using high-quality web sites to find information, however, there has been a paradigm shift with the advent of Web 2.0 technologies, which allow individuals to create, share, and alter

Table 2. Collaborative Online Tools

Web 2.0 Tool/Software	Examples	Purpose
Web Conferencing	Skype (www.skype.com) iChat	Used for web conferencing; veteran and new special educators can meet virtually anywhere at any time.
Wikis	Wikispaces (www.wikispaces.com) Google Docs (www.docs.google.com) PBWorks (www.pbworks.com)	Collaborative web sites for multiple participants to collaborate, write, and edit documents (e.g., including lessons, student specific data).
Virtual Wireless Headphones	There are many such devices including the Plantronics Voyager, BlueAntV1, Aliph Jawbone Prime. Tapped In (www.tappedin.org)	Can provide mentee with immediate feedback from mentor.
Online Communities of Practice (CoP)	SharedWork (www.sharedwork.org) LeadScape (www.niusileadscape.org)	CoPs engage groups of educators in discussion.

information. Such information sharing occurs through online social media such as wikis, blogs, social bookmarking, RSS (Really Simple Syndication) feeds, media sharing, and so on (see Table 2). Social networks that rely on Web 2.0 technologies are growing and can provide teachers with collaborative, supportive environments in which to gain expertise (Gutke & Albion, 2008). Society is experiencing a transition as more people begin to use computer-mediated social networks to gain information, make personal connections, and network professionally. The popularity of social networks among students as well as teachers has spread rapidly. Research focusing on the use of social networks to connect teachers has primarily centered around e-mentoring, which is defined as providing mentoring and induction supports through Internet-mediated communication such as e-mail, discussion boards, chat rooms, web conferencing, and other online interaction tools (Smith & Israel, 2010). Studies in the general education literature point to the positive effect of e-mentoring on new teachers' practices and job satisfaction (Headlam-Wells, Gosland, & Craig, 2006; Jacobsen, Friesen, & Clifford, 2004; Johnson, Maring, Doty, & Fickle,

2006) as well as teacher learning (Schlager, Farooq, Fusco, Schank, & Dwyer, 2009). Schlager and colleagues found that online communities allow teachers to "interact more frequently, build more diverse networks, and gain more equitable access to human and information resources not available locally" (p. 3). The authors discovered that, in studies that examined teacher discourse, the quality of online dialogue was equivalent to face-to-face interactions. It is anticipated that e-mentoring will show similar positive results in supporting the induction of early career special educators (Smith & Israel, 2010).

Collaborative Web 2.0 Online Resources

The available mentoring and induction literature suggests that although new special educators value mentoring and induction supports, those supports may be difficult to obtain because of limited interaction time (Smith & Israel, 2010). In their busy work days, new special educators often face difficulties associated with shared time for planning, lesson feedback, and observing mentor teachers. The proliferation of collaborative software that promote "group think" and collaborative problem solv-

ing create an ideal scenario for veteran and novice special educators to collaborate online and, thus, avoid many of the scheduling-related pitfalls associated with traditional mentoring practices. Although not specifically designed for P-12 educational purposes, many online resources lend themselves well to education-related online collaboration (see Table 2). For example, in addition to the *Reality 101* teacher blogs discussed earlier, CEC is also piloting a mentoring program between early career special educators and veteran teachers through their Pioneers Program.

We are likely to see additional Web 2.0 opportunities expand with applications for special education teachers. For example, a technology now available is remote coaching and communication in which practicum students or early career special educators receive real-time coaching from mentors or practicum supervisors who observe their instruction through Skype and provide feedback through a wireless earpiece (Rock, Gregg, Tead, Acker, Gable, & Zigmond, 2009). Skype can then be used to collaborate after the instruction either during the school day or at a more convenient time in the evening. In remote rural settings, an

early career special educator of students with significant disabilities may be the sole practitioner in this area. In such cases, receiving consistent mentoring support may be quite difficult without such technology. Wikis or collaborative web sites are options that are gaining momentum in facilitating online collaboration. Wikis allow multiple users to collaborate online with very minimal knowledge of web design or even wiki text (see box "Illustrative Case of a Small Collaborative Wiki"). In fact, many wikis provide a visual editor that can be navigated with knowledge of word processing. Figure 1 provides an example of a case-based collaborative wiki developed by Israel, Moshirnia, and Anderson (2008) for the assessment of complex "cases" related to inclusive education of students with disabilities. This password protected wiki developed through WikiSpaces allows preservice teachers to collaborate with their practicum supervisors around common situations found in their practicum placements.

Illustrative Case of a Small Collaborative Wiki

Layla is a third-grade student at Lincoln Elementary School. Layla has complex health and intellectual challenges that require her teachers, support staff, and parents to have close communication about her seizure disorder, her ongoing use of augmentative communication, and her academic progress. Her IEP team consists of her parents, the general education teacher, the special education teacher, the speech therapist, the occupational therapist, the physical therapist, and the nurse. Until this year, Layla's team communicated primarily through e-mail. Her special education teacher, Mrs. Kaseff, was frustrated with constant e-mailing to keep everyone updated and information that seemed to get lost in cyberspace. This year, Mrs. Kaseff designed a simple, password protected wiki within WikiSpaces to allow for better communication. She designed pages for Layla's health forms, communication, and various routines and strategies that facilitate Layla's inclusion into the third-grade classroom. Although many of the teachers, as well as Layla's parents, were unaware of wikis, they found it to be much more efficient than the e-mail trees of last year.

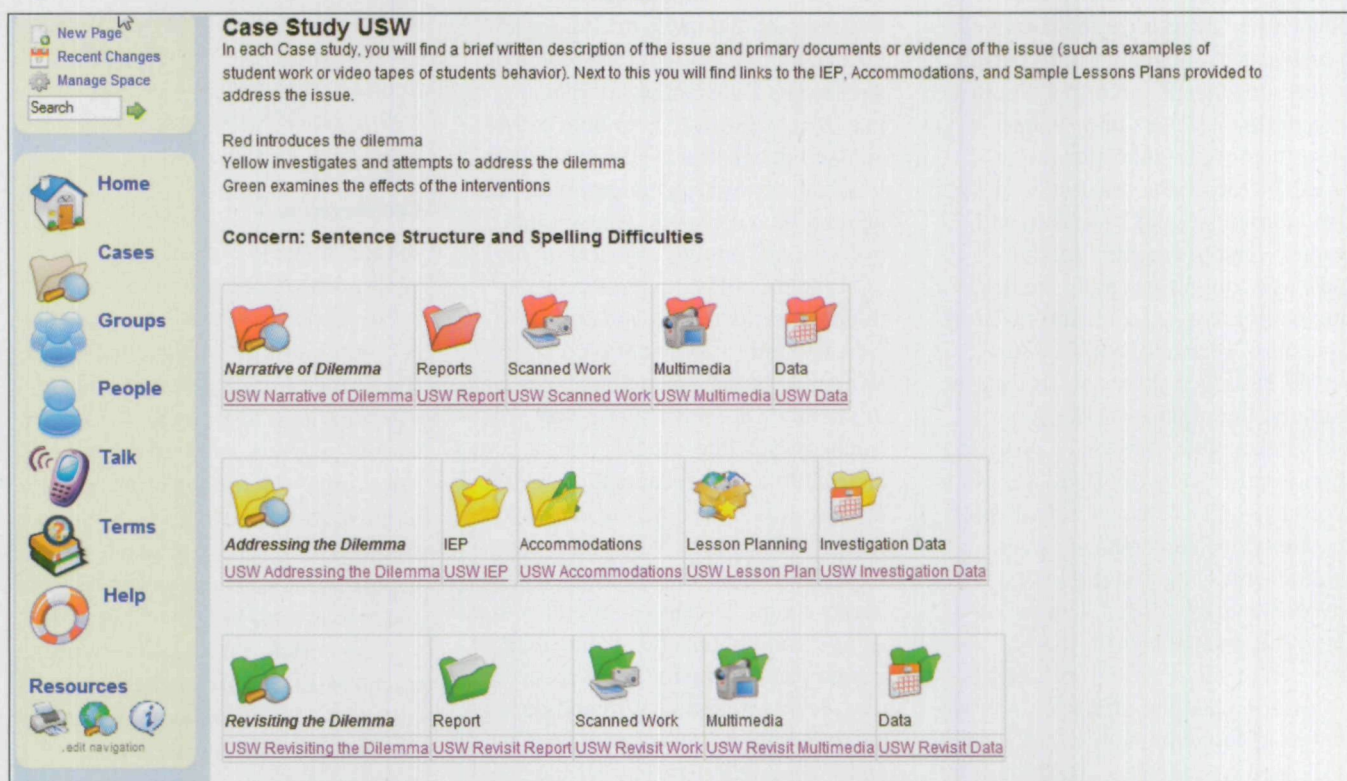
Considerations for Using Web 2.0 Technologies

Although Web 2.0 tools, on their own, hold potential for facilitating online collaboration between teachers, they may not be readily adopted without sufficient forethought, scaffolding, and support. As new users, many teachers may be extremely reticent to attempt to

communicate online. Several steps can be taken to help scaffold teachers' use of these new technologies including addressing issues of confidentiality, professional online conduct, teachers' technology learning curves, and teachers' participation in collaborative networks.

Confidentiality. One of the first issues that teachers, administrators,

Figure 1. Case-Based Collaborative Problem Solving Wiki



Note. From Case-based authentic assessment applications within wikis. *Proceedings of the World Conference on Educational Multimedia, Hypermedia, and Telecommunications (Ed-Media)* by M. Israel, A. V. Moshirnia, & S. Anderson, 2008, pp. 2608–2617. AACE.

and parents bring up when considering the use of Web 2.0 technology is that of confidentiality. Confidentiality issues extend to considerations such as protection of student identities and the protection of content shared between online mentors and mentees. If collabora-

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tion is centered on student data, confidentiality measures must be built into the online community. Thankfully, many social networks provide options such as password protected sites in order to allow for such communication. WikiSpaces, for example, provides free password protected sites for P-12 purposes. For a small fee, this service can be extended into sites used in teacher education, online mentoring, and so forth.

When integrating Skype or other web conferencing software into remote coaching for early career special educators, issues of capturing digital video must be addressed. Because recording Skype or other web conferences is relatively easy, it is important to create procedures for this occurrence. Preservice or new teachers may request to view their observations for future reflection, so addressing issues of student consent should be addressed prior to remote coaching sessions. Levels of consent generally are negotiated with school administrators. Israel, Knowlton, Griswold, and Rowland (2009) described three tiers of consent. The first tier of consent, or tacit consent, falls within the Family Education Rights and Privacy Act (FERPA), and is typically sufficient when virtual coaching and video conferencing occur without recording and does not involve research-related data collection. The authors explain that the second tier, or direct written consent, is necessary when the primary use of virtual coaching with video conferencing is focused on specific students and/or the video conference is digitally recorded. In this case, a letter should

be sent home to the child's family and may involve the school district's and/or university (if the virtual coaching occurs with preservice teachers) institutional review board. The last tier of consent, or research consent, is necessary if the virtual coaching and

video conferencing occurs for research purposes.

Online professional conduct.

Another issue that sometimes emerges is the ability of online users to adequately maintain professional conduct within professional social networks. This issue extends both to maintaining professionalism and providing and accepting constructive criticism. To address issues related to professionalism, differentiation must be clearly made between information freely expressed with their online friends (e.g., Facebook) and the professional collaboration that should occur through the use of educationally focused Web 2.0 tools. In addition to focusing on the use of respectful, student-focused interactions, teachers may struggle with how to both provide and accept constructive feedback within social networks, as information may be seen by other users. For example, in a study of preservice teachers' use of academic wikis, the preservice teachers freely added content, but were reticent to comment on, correct, or offer constructive comments for fear of offending the other preservice teachers using the site (Moshirnia & Israel, 2010). The collaboration within this site was limited by the preservice teachers' discomfort with challenging their peers. To mediate this issue, facilitators should discuss expectations that editing, modifying, and commenting to posted content enhances the collaborative processes, and they should model professionalism in modifying content and providing feedback.

Technology learning curve. Even the best thought-out social networks will

not succeed if its users are unfamiliar with how to utilize the Web 2.0 tools within them. Strategies to mediate the possible steep technology learning curves include the use of tutorials and designated orientation activities. Tutorials such as YouTube videos exist for most Web 2.0 technologies. For example, Wikis in Plain English (<http://www.youtube.com/watch?v=-dnL00TdmLY>) provides a simplistic account of four participants planning a camping trip through the use of a wiki. In addition, screen capture software can be used to illustrate navigation of various social networks. For example, Camtasia Studio, a screen capture and recording software, will allow users to create small podcasts of the computer screen, including features such as a highlighted mouse as it moves through the social network. The use of designated orientation activities will allow users to become familiar with various aspects of Web 2.0 technologies. Within a social network site, for example, teachers may be asked to post information to their personal profiles including information about their school contexts, areas in which they are struggling, and a profile picture of themselves. In this way, they will learn to upload documents (a picture) as well as create some content within the social network site.

Conclusions

Today the increasing availability of high-quality online resources and Web 2.0 technologies can be used to support both new teachers and their mentors as they work together to address questions and solve problems. As we have highlighted, many of these web-based resources are applicable to the needs of early career teachers and designed in a manner to provide important information, as well as tools and resources to help them apply this to their work in schools. These online resources are readily available at no cost, and Web 2.0 technologies can be used for sharing between mentor, mentees, and others at a distance. SETs may want to use Table 1 as a starting point, keeping a record of other rele-

vant web sites they learn about over time.

In addition to outlining specific web sites of interest to new teachers and their mentors, we suggest considerations for the use of Web 2.0 technologies, including attending to confidentiality requirements, online professional conduct, and learning new technologies. Likewise, those engaged in early career mentoring as well as professional development for special educators may consider the adoption of these resources and technologies to enhance ongoing efforts to improve teacher and subsequent student performance. Higher education faculty may consider sharing these web sites with their pre-service teachers to make them aware of and orient them to these helpful resources during their first years in the classroom. These online resources and Web 2.0 technologies may also provide needed support to general education teachers and school leaders given the shared responsibility for the education of students with disabilities, as these teachers increasingly take on greater responsibility for educating students with disabilities.

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