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Chapter Title: E-mentoring new special educators through educational partnerships in Ohio.

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Over the last decades, researchers have documented "new teachers' turbulent landings" into their classrooms" (Kardos & Johnson, 2010, p. 23). Without a system of supports, new special education teachers (SETs) struggle on their own to apply what they learned in their preservice programs and may become discouraged as they try to manage what seems to be insurmountable and often conflicting demands. Providing support to new SETs is often problematic given that there are fewer SETs available to serve as mentors, particularly for those teaching students with lower incidence disabilities (Smith & Israel, 2010) and for those in rural districts.

The kinds of induction programs that make a difference include varied supports, such as a mentor in the teachers' assignment area, opportunities for collaboration with other teachers, professional development as well as instructional coaching and feedback (Kardos & Johnson; Smith & Ingersoll, 2004). Providing induction is

particularly challenging in rural districts given the personnel and financial resources needed to provide multiple supports to only a few teachers.

Program Description

To address the needs of new SETs teaching students with low incidence disabilities and autism in Ohio, an e-mentoring partnership was developed among the University of Cincinnati, the Ohio Center for Autism and Low Incidence, the Regional Autism Advisory Council of Southwest Ohio, and local school districts. Currently, this collaboration is fostering ongoing e-mentoring and coaching and an active research agenda focused on how to (a) support teachers of students with low incidence disabilities, (b) prepare new SETs and their e-mentors to utilize the online tools available through this collaboration, and (c) coordinate with district instructional technology support staff in facilitating teachers' use of e-mentoring technologies.

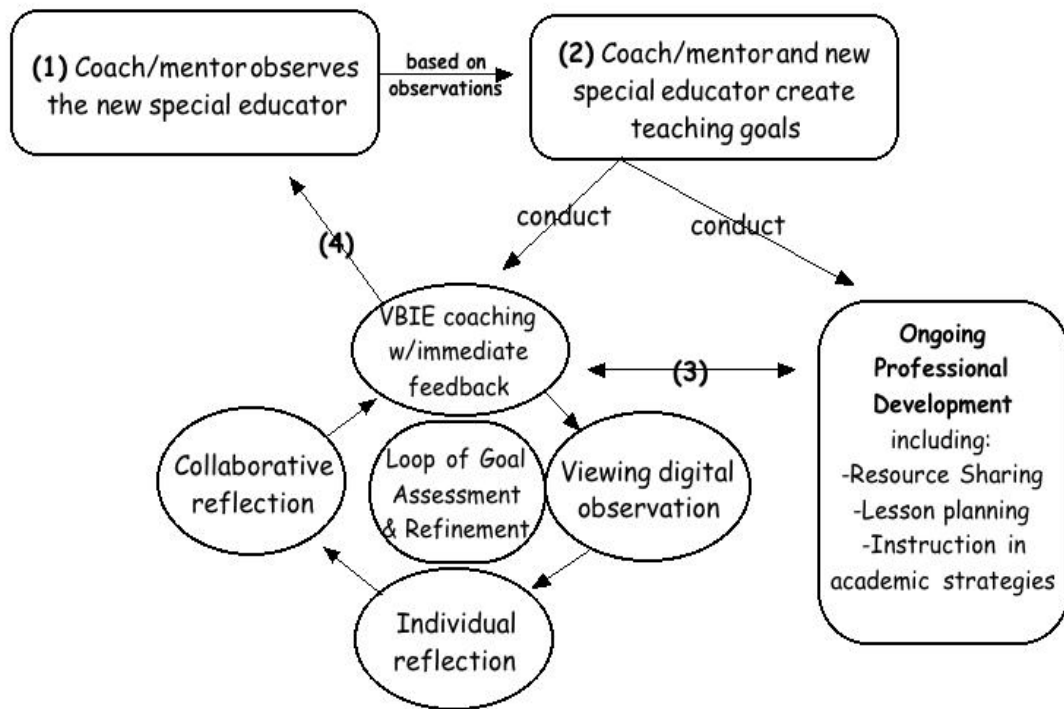**Technology formats that support e-mentoring**

To support the induction needs of new SETs in rural school settings, regardless of the local support infrastructures available to them, we chose to integrate a comprehensive system of e-mentoring utilizing Internet-mediated communications. By focusing on online means of reaching these new teachers, we eliminated the need for coaches to be physically present in the new teacher's instructional setting (Rock, Gregg, Thead, Acker, Gable, & Zigmond, 2009; Smith & Israel, 2010). E-mentoring, simply put, allows new teachers in rural settings to have access to coaches regardless of geographic location.

We chose to use a combination of synchronous and asynchronous technologies as neither form of e-mentoring support, on its own, fully addresses the unique needs of

our teachers. In this chapter, we focus specifically on the synchronous e-mentoring infrastructure as it relates to the broader e-mentoring system. The synchronous e-mentoring supports, offered through remote observations and coaching as well as post-observation conferences, allow for immediate interactions between an e-mentor and new teacher that is focused on immediate instructional feedback.

These synchronous interactions are seen as part of a broader e-mentoring infrastructure as they inform the coaches about the types of asynchronous supports necessary to extend the new special educators' professional practice. Figure 1 illustrates the conceptual framework of our e-mentoring practices (Israel. Carnahan, & Friend, in press). Coaches initially observe the new special educator and then collaborate with the new teacher in professional learning goal setting. Once the new teacher and his/her coach have developed clearly articulated goals, the coach and new teacher engage in synergistic synchronous virtual coaching using wireless headsets as virtual bug-in-ear (VBIE) coaching and asynchronous collaboration and professional development.

Figure 1: E-Mentoring Support Structure

(1) Coach/mentor observes the new special educator

based on observations

(2) Coach/mentor and new special educator create teaching goals

(4)

conduct

conduct

VBIE coaching w/immediate feedback

(3)

Ongoing Professional Development including:
-Resource Sharing
-Lesson planning
-Instruction in academic strategies

Collaborative reflection

Loop of Goal Assessment & Refinement

Viewing digital observation

Individual reflection

(Israel, Carnahan, & Friend, in press)

Several technologies are used within our synchronous e-mentoring efforts. These technologies allow coaches to observe new teachers during their instructional practices, provide them with coaching both during and after instruction, and then collaboratively problem-solve and extend learning within the asynchronous e-mentoring infrastructure.

Web Conferencing. A primary focus of the synchronous aspects of our e-mentoring program is remote observations and coaching through web conferencing technologies. As school districts have different levels of technology supports for web conferencing, we typically use computer video conferencing technologies with webcams and free web conferencing software such as Skype (www.skype.com) or iChat (www.apple.com) rather than investing in more costly interactive video conferencing (IVC) systems. Although webcams do not have the versatility of the more expensive IVC

systems, they can easily be used to conduct observations, especially of small group or individualized instruction.

IPod Touch Web Communications. In schools that have wireless Internet access, we have recently begun to use the new iPod Touch systems as they now contain built-in cameras and the software, *FaceTime*, which allows for video calling. Because the IPod Touch systems do not require connection to a computer with a webcam, they are proving to be more versatile. A teacher can simply place an IPod Touch on a small tripod and directly Skype with the coach. This system is cordless and can be easily moved to different instructional settings within a building without concern for direct connection to a computer.

Regardless of whether traditional webcams or the newer IPod Touch systems are used, both technologies allow the coaches and new special educators to access each other in real time. Additionally, because web conferencing software such as Skype and iChat are free, the cost of these communications, after the initial investment in technologies, is virtually free.

Wireless headsets for virtual bug-in-ear (VBIE) coaching. The same web conferencing technologies described above are used for VBIE coaching (Rock et al., 2009). The focus of VBIE coaching is to provide immediate coaching focused on the jointly agreed-upon goals set by the new special educator and coach. The new teacher wears a wireless USB headset (See Figure 2) during instruction that is synchronized with the web conferencing software (i.e., Skype or iChat) so that he or she can hear the coach. Through these technologies, the coach provides feedback as the new special educator teaches.

Figure 2: Wireless Headset Image

Digital Skype Recording. In order to facilitate collaborative problem solving

discussions, the online observations and coaching sessions are recorded through Call

Recorder, software that digitally captures any Skype interaction. These recordings are

then uploaded to a secure password-protected website for the new teacher to watch

prior to the follow-up collaborative problem solving conversation with the coach. As the

new teacher and coach conduct post-VBIE discussions, they refer to the recorded

instructional sessions.

Applications for teaching and learning

Similar to new teachers in other states, many special education teachers in Ohio

receive only limited mentoring. For teachers working in rural settings with students with

significant needs, this mentoring support may be limited given the nature of low-

incidence disabilities in rural areas. In southwest Ohio, it became evident that to meet

the needs of these teachers, cross-institutional collaboration and coordination needed to

take place between faculty in the Division of Special Education at the University of

Cincinnati, the Ohio Center for Autism and Low Incidence (OCALI), the Regional Autism

Advisory Council of Southwest Ohio (RAAC), and the local rural school districts. This

collaboration continues to grow and currently includes resource sharing, coaching

support, and coordination efforts with school districts.

Supporting coaches' use of e-mentoring technologies. The virtual coaches in our program are highly skilled face-to-face coaches with many years of experience. We utilize information about the coaches' background and specific areas of expertise to match them with new teachers, but recognize that each coach, individually, may not have the entire range of expert skills and content knowledge needed to support their new teachers. They benefit from relying on each other's knowledge and expertise. Therefore, to facilitate coach collaboration, our asynchronous community of practice includes an area for the mentors to collaborate, share information, and address issues that emerge. The mentors share general information, resources, and tools in the "resources" area so that the other mentors can use those resources with their mentees. They also have active discussions about individual teachers and their needs in order to collaboratively problem-solve challenging issues that may be difficult to navigate alone. Lastly, we support our mentors by utilizing both an online facilitator to assist with content needs and technology support to assist with any technology challenges. For example, the content facilitator connects the mentors with available resources such as online modules and tools and also coordinates the large-group asynchronous discussions. The technology facilitator helps the e-mentors and new special educators initially set up their webcams and wireless headsets to integrate with Skype, problem solve any issues with the school districts related to firewalls, and other general technology supports. Both facilitators fulfill an essential role in supporting the e-mentors and their new teachers.

Although the e-mentors have significant face-to-face coaching experiences, they may not, however, know how to translate those skills to an online environment. In order

to increase their ability to support teachers in an online environment, the coaches'
professional development focuses on general effective coaching and ways of translating
those skills to online contexts. We consider their professional learning similarly to that of
the new teachers; we cannot present a few professional development "seminars" and
expect them to automatically apply those skills into their coaching repertoires. Rather,
their professional learning must be embedded in their practice. For example, after initial
introduction to virtual coaching, the e-mentors practice their new skills with each other.
They work through the technology learning process with each other, dial into
experienced teachers' classrooms and practice virtual BIE coaching, reflect with those
teachers, and brainstorm together about how to improve their practice. Once they feel
confident in using the technologies and the practice of virtual coaching, they begin
coaching their new teachers. As they coach, the e-mentors have an online community
of practice dedicated to their professional development and collaborative problem
solving. Additionally, the other e-mentors, content facilitators, and technology support
staff provide ongoing feedback, resource support, and coaching strategies.

   Supporting new teachers' use of e-mentoring technologies. Prior to
beginning e-mentoring with new special educators in rural settings, several steps must
be taken to ensure that the schools in which the teachers work can support the virtual
coaching work. As this project is a collaboration between the University, OCALI, the
RAAC, and local school districts, there is already district support for the e-mentoring
efforts. This strong administrative support helps facilitate collaboration with the
instructional technology staff at the new teachers' schools regarding (a) which
technologies would best work within those specific school contexts (e.g., if the school

has wireless Internet, they may use the IPod Touch cameras and if they do not, they may use more traditional webcams connected to computers in the classrooms), (b) opening fire walls in the schools to allow for Skype interactions, and (c) any support they would need in using the technologies. Once the new teachers have the necessary technologies and are assigned an e-mentor, they receive similar support in learning the new technologies as the mentors. For example, they are provided with experiences addressing familiarity with their assigned e-mentor, the technologies used for virtual BIE coaching, and the online community of practice.

Connection of synchronous and asynchronous e-mentoring communication

The purpose of our e-mentoring program is to provide comprehensive supports that may otherwise not be available to the new special educators working with students with significant disabilities in rural settings. Consequently, both synchronous and asynchronous supports are integrated into the system. As discussed above, the synchronous components provide immediate help, coaching, and problem solving. The asynchronous components support the synchronous efforts by focusing on professional learning, resource sharing, and communications between the new teachers around "big picture" topics such as structuring an effective classroom, extending social communication, and increasing academic rigor. The synchronous and asynchronous efforts are seen as synergistic and equally important.

Conclusions and Recommendations

In this chapter, we provide a brief overview of what is possible in the area of e-mentoring. For early career special educators, e-mentoring offers a tool that could be the difference between classroom success or departure from the rural school, let alone

the profession. The teacher profession has an unprecedented opportunity to harness this powerful tool as we further conceptualize how best to support new teachers. For teacher mentoring, e-mentoring can include just-in-time supports, meaningful interaction, direct observations, and access to a professional competent to offer the critical guidance ad support. Highly specialized mentoring can be offered that is often unobtainable in the rural environment due to lack of school or district-based expertise. In addition, technology innovations will only further what is possible in and out of the classroom.

  With this said, current school and district hardware, software, and security measures (e.g., firewalls) often prevent or frustrate e-mentoring efforts. Thus, further development and research is needed to offer multiple synchronous and asynchronous options while also providing the field evidence of the effectiveness of the e-mentoring process. Furthermore, in the area of special education, educators and researchers need to consider the unique components of special education and how teacher induction efforts require alternate supports not available in current general education mentoring supports.

  Special education teachers are at risk for leaving the field or holding positions for which they are under-qualified and in need to professional support to develop the skills needed for their current position. However, with access to a mentor and on-going support from an expert mentor, the outcomes for special education teachers in rural environments may be much improved.

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