DISTANCE EDUCATION FOR TEACHER TRAINING:

Modes, Models, and Methods

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Section II. Chapter 14

PREPARING DISTANCE LEARNERS

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Best Practice: Successful distance education programs prepare learners to successfully complete their distance education program.

14.1 Overview

For many prospective and current teachers, their first experience as a distance learner may occur in their very first distance learning program. For highly structured, technically simple, and classroom-based modes of distance education such as interactive audio instruction (IAI), instructional television, or short online mini-modules, a lack of preparation in these modes of distance education may make learning and implementation of learning difficult. But for less structured, highly technical, and non–classroom-based modes of distance education—immersive environments, online courses, or self-directed print-based learning—a lack of preparation in the intended mode of distance learning may make transfer of learning impossible.

The education world was introduced to the complexity of learning via distance during the COVID-19 pandemic remote schooling in 2020. The concept of "attrition," or dropping out of an online program, moved from a dry, abstract education metric to a global learning crisis and educational tragedy as students simply disappeared from their online courses, adaptive learning programs, or *Zoom* classes (Spitzer et al., 2021).

Long before the COVID-19 pandemic, attrition emerged as a perennial problem in distance learning programs as noted in Chapter 5. For example, in 1998 Potashnik & Capper estimated the overall attrition rate from mainly print-based distance education courses to be about 40%. Slightly more than a decade later, Latchem & Jung (2010) assessed the attrition rate in Asian open universities (which tended to blend a mix of distance modalities) at 90%. More recent data on Massive Open Online Courses (MOOCs) show that even among high-achieving learners who are motivated and intend to complete their course, only about 20% do so (Kizilcec et al., 2020). And even where learners *do* complete a MOOC course, they are less likely to continue with this mode of instruction. For instance, a multiyear study of the two largest MOOC providers, *Coursera* and *edX*, found that retention rates declined with every cohort, from 38% in 2012 to 7% in 2018 (Reich & Ruipérez-Valiente, 2019).

14.2 The Problem of Attrition in Online Courses

The most established distance education route for pre- and in-service teachers is via traditional online courses, a mixture of bichronous or asynchronous instruction. Although it is difficult to determine an exact overall attrition rate for online education, research has typically shown that attrition rates in online courses greatly exceed those of face-to-face instruction; these estimates, however, vary widely, from 10%–20% to 40%–80% (Bawa, 2016; Holder, 2007; Smith, 2010).

Attrition rates are different for different types of online courses. For instance, the attrition rate was 31% for learners from 16 Sub-Saharan African countries participating in the Global e-Schools and Communities Initiatives (GESCI)'s *African Leadership* in ICT (ALICT-LATIC) blended course

from 2012-2015 (Santally, 2016, pp. 118–119). For a five-month, cohort-based, highly structured online coaching course in Indonesia, it was less than 5% (Burns, 2013). As noted in Chapter 5, the attrition rate for TESS India's *Enhancing Teacher Education Through OER MOOC!* was 50% across two iterations of the course (Wolfenden et al., 2017, as cited in McAleavy at al., 2018). While there is no fixed rate of attrition or persistence across online courses, we can state with some confidence that for universities and other institutions of higher education (teacher training colleges, for example), a significant portion of online learners fail to complete a course of study.

As Chapter 5 suggests, online learners espouse a number of motivations for taking an online course—flexibility, cost, convenience, and perceived ease of completion. But these motivations may not compensate for the many extrinsic and intrinsic online-learning–related factors that contribute to attrition, which include:

- personal, financial, work-related, and family issues (Barab et al., 2001; Bawa, 2016; Park & Choi, 2009);
- the very open and distant nature of online learning, particularly in asynchronous courses (Perraton et al., 2002);
- a lack of support in many online courses (Burns, 2016a; Price et al., 2007);
- unrealistic expectations about the time and effort needed to complete an online course (Holder, 2007; Stanford-Bowers, 2008);
- unfamiliarity with learning in a distance environment (Bawa, 2016; Latchem & Jung, 2010; Ng, 2012);
- poverty and lower academic ability (Acosta et al., 2021; Price et al., 2007);
- a belief that virtual learning is less real than in-person learning (Park & Choi, 2009; Price et al., 2007); and,
- the fact that many online courses are presented as part of higher education institutions where dropout rates tend to be higher, even in in-person programs (Hanson, 2022).

It is difficult to overstate the degree to which attrition threatens online learning as a viable educational delivery mechanism. Lower retention and completion rates (i.e., higher attrition rates) are a barrier to more widespread adoption of online learning. High rates of attrition, especially as witnessed during the remote learning of the COVID-19 pandemic, undermine the perceived quality, utility, and cost-effectiveness of online learning. Indeed, high rates of attrition undermine the very legitimacy of online learning and call into question whether it is even worth the investment.

Nor can the importance of preparing online learners to succeed in an online environment be overstated. The previous chapter discussed the challenges of teaching well in an online learning environment; it is often equally difficult to learn successfully in an online environment, whether synchronous, asynchronous, or bichronous. This is particularly true for learners who are new to using technology, learning through technology, learning alone in unstructured environments, and who may also face personal, professional, and financial challenges. For many readers working in teacher training programs in the Global South, this profile may essentially constitute the majority of their online learners.

Thus, as will be discussed in this chapter, given the inherent threat of attrition in online learning, online programs must prepare their *learners*, as they do their instructors, to succeed in an online environment.

14.3 What Qualities Define Successful Online Learners?

Every online learner is unique. Just as online learners may leave a course for a variety of reasons, each may persist in an online course or course of study in his or her own way. That said, the research generally points to three sets of characteristics that influence persistence in online learning.

14.3.1 Personal Characteristics

The first are the *personal characteristics* of the online learner, among them self-discipline, autonomy, responsibility, self-directedness, self-efficacy, and self-regulation (Berry, 2017; Chen et al., 2018; Edisherashvili et al., 2022; Holder, 2007; Hoxby, 2017; Keegan, 1996; Stephen & Rockinson-Szapkiw, 2021; Zimmerman, 2011). The three characteristics of self-directedness, self-efficacy, and self-regulation are distinct, although interrelated, and are frequently conflated. While they are important for in-person learning, their importance is more pronounced in many forms of distance learning, such as online learning (Edisherashvili et al., 2022).

- *Self-directedness* involves learners choosing to initiate their own learning—diagnosing their own needs, formulating learning goals, implementing learning strategies, and evaluating their own efforts and outcomes (Knowles, 1975).
- *Self-efficacy*, previously discussed in Chapter 8, is a belief that the learner can succeed if he or she tries. Learners with high self-efficacy believe that greater effort will lead to successful outcomes, a critical component of self-regulation (Bandura, 1997).
- *Self-regulation* is the ability to organize one's emotions and behavior and thoughts in pursuit of attaining a long-term goal. It typically involves three "phases:" forethought, a focus on performance, and reflection (Zimmerman, 2011).

Broadly, learners who have these qualities generally succeed in online learning. Learners who don't, struggle in online environments. And while there is evidence that online learning can help learners develop these personality characteristics, there is little evidence that online programs are actually doing so (Barbour, 2014, p. 503).

Three categories of learners appear to be particularly vulnerable to attrition. The first are part-time online learners who often face a plethora of competing personal and professional demands (Lowe, 2005). The second are learners who matriculate from face-to-face learning environments that promote more passive learning (Lowe, 2005). The third are online learners who come from disadvantaged backgrounds (Kizilcec & Halawa, 2015). As discussed in *Chapter 5: Online Learning*, attrition rates are much higher among these groups—women, learners who work full time, economically disadvantaged learners, those from the Global South, learners who may not have been raised speaking the online course language of instruction, who are part of a minority racial or ethnic group, who have lower educational attainment, and who are academically at risk (Burns, 2021, p. 77; Chen & Jang, 2010; Kizilcec & Halawa, 2015). These disproportionately high attrition rates among less-affluent groups of learners undermine another of the more compelling justifications for online learning—that it provides equitable access to learners for whom face-to-face learning is not an option (Burns, 2021, p. 77).

14.3.2 Learning-Related Characteristics

The next set of attributes addresses *skills related to learning online*. These include expectations about the rigor of online study and its actual level of difficulty; the ability to successfully use technology; prior education level; successful completion of an online course; time management skills; reading and writing ability; and information management skills (Berry, 2017; Harrell & Bower, 2011; Holder 2007; Kizilcec & Halawa, 2015; Mandernach et al., 2006; Park & Choi, 2009).

14.3.3 Course and Program-Related Characteristics

Finally, there are *course/program-related variables,* such as access to technology, support, and materials; learner engagement and interaction with other learners; and learners' sense of connection or isolation. Positive learner perceptions of the instructor regarding the responsiveness, frequency, and quality of communication and feedback are linked with successful online completion, as discussed in the previous chapter. Course design and delivery modes (synchronous versus asynchronous) also influence the learner's sense of connection or isolation to the instructor, institution, or a learning

group (Lapointe & Reisetter, 2008; Rizvi et al., 2020; Stanford-Bowers, 2008).

All of these variables—those related to the personality of the online learner, to the course itself, and to the nature of online learning—are highly interconnected and affect a learner's readiness to be a successful online learner.

In many parts of the world, pre- and in-service teacher-learners may enter an online learning environment with little or no readiness to learn online. They may have little or no experience with distance learning in general or with online learning in particular. They may not know what an online discussion is, why it is essential to an online course, how to compose the types of thoughtful responses that stimulate and sustain discussion, or how to respond to a colleague's posts—especially if they disagree with the content (Burns, 2010). They may lack familiarity with conventions of online communication. They may have no knowledge of "netiquette"—using appropriate subject lines, addressing the individual or group, and using techniques to extend the online discussion—seemingly minor points that cumulatively can derail communication and learning in an online environment. More critically, learners may not understand the value of interacting with a likeminded community of professionals or see themselves as part of a broader network (Burns, 2010).

This degree of readiness in turn influences the learner's chances of success in an online program. Learners with low readiness—who may not have ever partaken of an online course, who lack suitable time management skills, or who don't read or write well or like to read and write—are more likely to drop out of an online course. In contrast, learners with a high degree of readiness, such as those who possess the personal skills associated with successful online learning and those with strong technology skills who have strong information management skills, are more likely to persist in an online course.

14.4 Preparing Teachers to Be Successful Distance Learners

Because attrition is such a threat to online learning, and because its causes are so multilayered, the remainder of this chapter focuses on strategies to prepare pre- and in-service teachers to become "successful" distance learners— that is, learners who complete the requirements of their distance course.

Distance programs can undertake this preparation in a number of ways, as detailed below.

14.4.1 Diagnostically Assess a Learner's Readiness to Participate in a Distance Course

Research on successful distance learners demonstrates that they are highly motivated, self-directed, comfortable with technology, and have good time-management skills (Bawa, 2016; Mandernach et al., 2006; Rizvi et al., 2020). While these are clearly the types of learners that distance programs should attempt to reach, they may not be the learners who enroll in a program. Nor do these findings mean that learners who lack *all* of these skills should be screened out of distance education opportunities, since research also demonstrates that these skills can be cultivated in an online learning environment where there is sufficient instructor support (Barbour, 2014; Bawa, 2016; Burns, 2013).

Distance education programs can administer a self-assessment tool that allows the learner to measure his or her readiness to participate in a distance learning course. Surprisingly, most distance learning providers do not appear to use self-assessment data to screen for course registration. Such self-assessment tools can focus on a series of learner behaviors, attributes, or competencies, such as computer,

literacy, discussion, time management, and communication skills. Some self-assessment tools include a sum score that indicates whether or not the learner will be successful in the course.[1]

In addition to such self-assessments, programs also can create interest inventories or "mini-courses" that give learners a taste of learning in an online world.

14.4.2 Create High-Touch, High-Interaction Courses

While it is easier—logistically and financially—to create asynchronous, self-paced courses for online learners, attrition is much higher in these kinds of courses. There is little structure; no one may know or care if they drop out; and the learner is alone in the pursuit of his/her learning endeavors. Distance education programs should balance asynchronous, self-paced courses that allow for flexibility and convenience with instructor-led, cohort-based, collaborative, and highly synchronous courses that offer multiple opportunities for meaningful and constant learner interaction with content, with the instructor, and with one another.

High-touch, high-interaction, highly structured courses with a heavy emphasis on learner-instructor and learner-learner interaction can create engaging, caring, and collaborative learning environments. Online learners repeatedly cite connectedness with peers as the most important variable in developing a sense of community (as discussed in the next chapter) (Santally, 2016). This connectedness has been shown to significantly affect perceived learning (Berry, 2017; Gray & DiLoreto, 2016). Meaning-making is more easily done as part of a community, especially if the course is organized as a project- or inquiry-based activity and the instructor offers continuous support. It is emotionally and cognitively powerful to wrestle with difficult concepts and interpret information with a community of learners and because of the high degree of interdependence in such a course, there is less temptation to give up since learners need each other to complete their work. Such courses can foster a sense of belonging and community and create an environment that cultivates both self-confidence and self-efficacy (Bandura, 1997).

Grouping composition and size are important in such an environment. Groups must be large enough to promote diversity of experiences and ideas, yet small enough to allow for true collaboration and meaningful roles, lest the "free-riding" problem—where one learner benefits from a group grade without doing his/her share of the work—emerges (Burns, 2016b; Johnson et al., 1990; Laurillard, 2016). In terms of optimal group composition, like-skilled tiered grouping, where members have similar skills, is better than other types of grouping when the end goal is improving learning for all individuals (Wiens et al., 2022).[2] In terms of optimal group size, Johnson et al. (1990) recommend no more than 4–5 learners per team. Anything larger makes meaningful group roles harder to develop (Burns, 2016b).

14.4.3 Offer Blended Learning Opportunities

Some may feel that this approach defeats the purpose of a distance program; however, combining distance learning with a sizable portion of face-to-face assistance offers greater opportunity for successful completion of a distance education program. As discussed in Chapter 5, blended learning offers several advantages.

It offers personalized and individualized just-in-time teaching, learning, and support (this topic is discussed at greater length in *Chapter 16: Supporting Distance Learners*). It bridges the

[1] One such resource comes from the U.S. State of Washington's State Board for Community and Technical Colleges: "Is Online Learning for Me?" See https://www.sbctc.edu/becoming-a-student/right-degree-you/is-online-learning-for-me.aspx. See also the McVay Readiness for Online Learning Instrument, which is more grounded in research.

[2] For more information on how to group learners, view https://tinyurl.com/5n72xfts.

psychological, conceptual, and programmatic distances between instructor and learner, between the distance program and the learner, and between the distance program and schools. Both pre- and in-service teachers appreciate the convenience of online learning, but they often want the richness and depth of interacting face-to-face with their colleagues (Burns, in press). Though referencing their relationships with children and adolescents (versus adult learners), a survey of American teachers reflecting on emergency remote teaching during COVID-19 pandemic school lockdowns pointed to some noteworthy concerns about how well they met their students' social-emotional needs online versus face-to-face (Arnett, 2021). In short, as seen during COVID-19 pandemic emergency remote learning, for many instructors and learners, optimal learning situations still involve the physical presence of an instructor.

Finally, for activities specifically related to teaching—such as clinical teaching experiences or in-class implementation of a particular instructional strategy—it is simply easier to monitor, assess, and provide feedback in person versus online. However, in the absence of inspectors, mentors, or supervisors who can travel to a remote school to supervise a practicum or monitor the implementation of a new literacy approach, technology can record the practicum so that supervisors or distance education instructors at another location can review and provide feedback at a later date. Or teachers can use a *Swivl* camera so an offsite coach or observer can assess or assist with classroom implementation of an innovation.

Not all online programs or providers may be able to afford three modes of instruction—fully online, fully face-to-face, and blended. Thus, if courses are online, it is important to blend as much as possible—that is, between modes of instruction (synchronous and asynchronous) and interactions (in-person and online)—via the use of online "face-based" tools (Web conferencing tools).

14.4.4 Offer an Orientation

Orientation to online courses or programs has been shown to boost online learner retention and is particularly valuable to novice distance learners (Bawa, 2016; Burns, 2016a). McVay (2000) found that when learners experienced orientation sessions, drop-out rates that had been 35%–50% decreased to 8%–15%. Unfortunately, universities often have omitted orientations for online learners. As an example, as of spring 2020, only 12% of U.S. public four-year institutions required an online learner orientation prior to the term. Since the COVID-19 pandemic, however, this has increased to 34% (Garrett et al., 2021, p. 37).

Orientations offer practical benefits: They allow instructors and learners to examine the syllabus; learn how to use technology, materials, and perform course routines; ask questions; create a group calendar; or complete a Help request. They also can begin to help learners develop online habits of mind: overcoming procrastination, developing self-regulation strategies, and honing appropriate online communication techniques. This technical, social, and academic preparation often is cited by online learners as one of the factors contributing to their success in online learning (Bawa, 2016; Burns, 2013).

Beyond following the "letter" of distance education, orientations can help learners also understand the "spirit" of distance learning. Most importantly, if orientations are in person, learners meet each other and begin to work together. In so doing, they begin to grasp that a successful online learning experience requires a high degree of individual and collaborative involvement and their individual and collective responsibilities as active, engaged, and collegial online learners. When explicitly designed to do so, orientations can prepare potential learners to understand the importance of both community formation and of the Internet as a *vehicle* for community formation. Learners can begin to see their online program or course not just as a collection of resources but as a "place" with

like-minded "neighbors," a collection of human collaborative efforts.

14.4.5 Differentiate Online Learning Offerings

As Chapter 5 elaborated, online learning is extraordinarily diverse, but we often channel learners into a narrow range of online learning opportunities—an asynchronous course through a learning management system (LMS) or a fully synchronous *Zoom* class.

Online learning can be blended, synchronous, asynchronous, or bichronous, depending on the platform employed. Thus, to get the best for and out of online learners, programs that have the resources to do so, should offer different platforms for online learning. To do begin to do this, however, educators have to understand *who* their learners are, *what* they need to learn, *how* they can best learn, their levels of readiness, and the best way to design and deliver online courses to address the readiness factors raised in the previous section. The answers to these questions determine the platforms to use.

Online platforms, as seen in Chapter 5, occupy a continuum from solo, traditional offerings to more social-collaborative ones. At the more traditional end of the spectrum, *Massive Open Online Courses* (MOOCs) can be made available to learners who are highly self-directed and who prefer to learn at their own pace. Google *Classroom,* which teachers across the globe use for their students, is a platform with which many teachers are comfortable; yet it is little used in adult online learning, except for content storage and workflow. Moving toward the more the collaborative, social end of the spectrum, educational social networking sites, such as *Facebook Groups*, combine the functionality of a traditional LMS with the more peer-based, open, and "flatter" design and interaction of a social networking site (Burns, 2016a).

Here learners can communicate, interact, and collaborate and with structure, time, and support, build some kind of community.

Finally, online immersive environments—virtual worlds, virtual reality, and gaming, for example—occupy (thus far) the farthest end of the continuum from traditional online classes. Although not common as modes of teacher online professional development, as discussed in Chapter 4, they may be particularly helpful when teachers lack strong content knowledge as well as thinking, reasoning, and problem-solving skills. Such platforms can serve as engaging vehicles to promote situated teaching skills while reducing extraneous cognitive load.[3] They can also help teacher-learners interact with and manipulate complex systems and engage in scenarios that would otherwise be impossible (Burns, 2016a).

The key point here is that online learning is, and should be, a highly diverse enterprise and that teacher education programs should embrace new models of online learning and plan teacher learning experiences accordingly. Not every teacher will require the same type of online learning experience, nor will every teacher respond positively or equally to the same model of online learning. Program designers must take care to avoid the "one-size-fits-all" approach of so many current online learning offerings and take care to differentiate online learning offerings based on teachers' diverse needs and learning preferences.

14.4.6 Help Learners Develop Study Skills

For many learners coming from the directive, more didactic, and highly structured world of in-person learning, the online environment may simply be too ill-structured, too open, and too disorienting (Bawa, 2016). Thus, to reduce the amount of up-front and ongoing support and guidance learners may demand of their instructors, online learning programs can work

[3] See Chapters 1 and 11 for discussions of cognitive load.

to help them become successful distance-based students who cultivate independent study strategies and skills. These include the following:

- **Time management skills.** These skills include developing schedules, setting aside one hour a day to work on the course, using a timer (such as the Pomodoro technique[4]), making a calendar or schedule, developing mindfulness techniques, setting hard deadlines, and rewarding oneself for completing a task.

  An important part of time management is helping learners understand procrastination, what it is, and why it's dangerous to online learning success. Procrastination is not laziness but rather a technique for "coping with challenging emotions and negative moods induced by certain tasks—boredom, anxiety, insecurity, frustration, resentment, and self-doubt" (Lieberman, 2019). These feelings occur most often when learners are faced with a task that they view as "aversive" (i.e., boring, frustrating, lacking meaning and/or structure), and that therefore leads to unpleasant feelings or a negative mood (Escueta et al., 2020; Sirois & Pychyl, 2013, p. 4). What is the best strategy to overcome procrastination? Just start.

- **Information management skills.** These skills include searching, retrieval, and curation strategies for print and electronic resources as well as the ability to organize and manage files, archive, update and disseminate information. They also involve strategies to avoid being overwhelmed by course requirements.

- **Plan making.** Especially for first-time online learners, distance programs can provide techniques for completing work and establishing plans, routines, and procedures by which learners can accomplish their online work. Plan making has been shown to help in the first few weeks of an online course. It does require continuous revisiting, otherwise the effects fade (Kizilcec et al., 2020).

14.4.7 Help Learners with Writing

Online learning is still a read-and-write medium. Many learners have problems with the rhetorical, grammatical, and mechanical conventions associated with writing. In Indonesia, as part of its school-based coaching program, EDC devoted two days of its face-to-face orientation to helping online learners (in this case, coaches in training) develop writing skills. Learners examined the structure and characteristics of good written posts (anchors). They practiced writing online posts alone and with their coaching partner, practiced responding to discussion questions, provided one another with written feedback, and revised their posts. Finally, learners helped to develop indicators for rubrics so that they understood the assessment criteria for their own written work. Text-to-speech tools, such as those found on phones, and voice tools can be harnessed to support or replace writing in an online course, so that online learners who have undiagnosed disabilities or are simply poor writers could still participate in online communication.

Online written communication is a particularly important skill because written communication is often the lifeblood of an asynchronous or bichronous class. It is also critical because of the inherent challenges associated with it. In spaces where we are physically proximate with others, nonverbal cues, the norms of polite behavior, self-consciousness, concern for others, anxiety, shyness, and other social cues subconsciously govern our behavior and keep our inhibitions in check. In online settings, these aforementioned constraints are absent or less apparent, and as such, online communication may become less inhibited—driven by a lack of awareness or concern for how we communicate, how we are perceived, and how we affect others, particularly if we're in an online course where we've never met the other learners and may never meet them (Burns, 2019). We may say something that is rude, insulting, or unpleasant—often unwittingly,

[4] See https://tinyurl.com/mr375sbd

sometimes indifferently, or even deliberately. Suler (2004) calls this the "online disinhibition effect"— essentially acting online in ways we'd never do in person, especially with people we don't know or barely know.

Four discrete though intersecting factors fuel the negative online disinhibition effect. The first is "fast" thinking. This is thinking that is reactive, instinctive, and almost primeval. It is often our first, and instinctively emotional, reaction to an online article, an image, or a comment (Kahneman, 2011). It can lead to the expression of heartfelt sentiments or to reactive angry comments. Second is the anonymity afforded by online interactions—learners may not see each other, know who is in the course, or have interacted with other online classmates. Third is the mechanism of online communication itself: It is *physically* easy, effortless, and instantaneous (Just click "Send."). Finally, unlike an in-person conversation where we see the impact of our words on the listener, we can't see another online learner's reaction. Thus, the combination of an instinctive emotional reaction, the frictionless instantaneity of online communication, the anonymity, and the inability to see the hurt we've caused can severely corrode the morale, motivation, and *esprit du corps* of an online class.

There are a number of ways to address the disinhibition effect: educating learners about proper online communication; helping learners develop "wait time" skills before sending a response, especially where there's disagreement; teaching "netiquette" and digital citizenship skills; and helping learners communicate different points of view in neutral, non-threatening ways for example, by including stems, prompts and protocols for disagreeing or having difficult conversations. Other strategies include ensuring that learners know each other; establishing and enforcing online codes of conduct; using real names and photos; and ensuring that flaming, trolling, bullying and other negative online behaviors be immediately addressed.

14.4.8 Help Learners with Reading

Many teacher-learners are not readers. They may not like to read or may be unable to read well—or at all—in official or national languages (e.g., French, Spanish, Portuguese, Dari, or Amharic). Figure 1.2 in Chapter 1 discusses the difficulties of reading well from a screen. Online learners may come from oral cultures in which text-based information is not the norm for information transmission. Or they may read well in the national language but be unfamiliar with the more academic language of online courses.

To address these reading issues, many online course developers have devolved into creating content that are entirely multimedia based or offering "readings" that are tantamount to a half-page list of bulleted points. This may be convenient from a design perspective, but it is deleterious from a learning perspective. It is imperative that teachers be able to read text that is long and complex and be able to understand the main themes of such text, analyze these themes, and distinguish between fact and opinion (Carr, 2011; Schleicher, 2018; Wolf, 2018; see Figure 1.2 in Chapter 1). Online learning designers may not do learners any favors by reducing readings to a collection of lists and bullet points.

A number of reading techniques for adults can begin to address this. One is the College Board's SQ3R adult reading technique,[5] which can be used to help online learners better comprehend written text. This technique comprises five steps:

1. *scanning* the text to get a general overview of content;
2. *questioning,* noting any questions one has about the text as a whole or about particular vocabulary;

[5] Although developed in 1946, SQ3R has held up well according to research. For more information on the method, visit https://e-student.org/sq3r-study-method/

3. active *reading,* carefully reading the text and making written notations;
4. *reciting,* mentally reciting and summarizing the main points of that section after reading it; and,
5. *reviewing,* in this case with a partner, the main points of the text.

The point is not to emphasize one approach over another, but to recognize that in a distance learning medium, teachers, like students, may need an array of remedial supports to complete a course of study successfully.

14.4.9 Provide Technology Training and Support

The myth of the "digital native" has convinced online program designers that young pre-service and in-service teachers are technology wizards and older teachers are technology Luddites. Neither of these stereotypes is true (Burns, in press; Ng, 2012; Pota et al., 2021). Teachers at both the pre-service and in-service levels require training in the technology tools they will use to learn via distance. Many times, though, the technology instruction may be overly expansive and decontextualized from the learning experience as a whole. While potential learners do need instruction in the technology they will use, it should be just enough, just in time, and job-embedded (see Figure 14.1).

Figure 14.1
The 5Js of Technology Training

The 5Js are a mnemonic that help educators focus on essential practices to help teachers learn technology:

1. **Job-related:** Focus on the core competencies of the classroom, not just on the technology.
2. **Just enough:** Emphasize increased comfort, not proficiency, with computers. Focus on 1–3 techniques, no more, for using a particular application.
3. **Just in time:** Provide teachers with technology training as needed and when needed.
4. **Just in case:** Encourage teachers to plan for contingencies in case the technology fails.
5. **Just try it:** Apply enough pressure and support to compel teachers to try with their students one simple thing they've learned in their professional development (Burns & Dimock, 2007).

This technology training must be accompanied by technology support for online learners. Online courses and programs have to provide live or just-in-time technical support. Asynchronous courses, in particular, must make available a support person or tutor who can help struggling learners with difficulties they may encounter with technology, as well as with content, directions, or an assignment.

14.4.10 Use LMS Analytics as an "Early Warning System" to Support Struggling Learners

Learning management systems (LMSs) generate a range of analytics (e.g., enrolment, log-ins, assignment submissions, time spent on an assignment), as well as discussion forums, emails, tests, and quizzes. These data can be used as part of an early warning alert system to tailor and automate supports for learners who fall behind. Within the LMS, the instructor can set up a number of conditions learners must meet in order to attain academic success; send alerts to the online instructor about a learner's status; and trigger automatic responding interventions directed to the "at-risk" learner (e.g., assigning more personalized instruction, tutoring, or a face-to-face or phone meeting). Such assistance helps the online instructor become aware of an online learner's struggles and can automate a set of stepwise system supports—such as, technical reminders to direct instructor intervention—for struggling online learners to help them complete the course.

14.5 Conclusion

Distance education programs must take care to focus as much on human beings as they have on technology. They must help both learners and

their instructors develop the knowledge, skills, readiness, and dispositions to be active and successful members of an online community of learners and practitioners.

As we learned during emergency remote learning in 2020, learning is a highly social experience, and distance learners need and want to learn with their peers. Even if the primary mode of online instruction is asynchronous, it is important to build a surrounding sense of community so that online learners can share ideas, ask questions, and support one another (Bawa, 2016; Burns, 2013; LaPointe & Reisetter, 2008). That community, and how to design it, is the focus of the next chapter.

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