CHAPTER 3

ASYNCHRONOUS AND SYNCHRONOUS MODALITIES

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Along with formulating specific, observable, and measurable learner outcomes, one of the basic decisions that OWI administrators and instructors must confront involves course design and delivery, and more specifically, choosing from among the many tools and techniques available for OWI. That decision-making process inevitably requires managing the questions of digital modality: when, why, and how to deploy asynchronous (non-real time) and synchronous (real time and near-real time) modalities. This chapter addresses those questions along with the dimensions of inclusivity and accessibility, technical viability and support, and pedagogical rationale.

Keywords: accessibility, asynchronous, impact, inclusivity, modality/ies, near-real time, non-real time, pace, permanence, scale, social presence, synchronous, technical viability

There are the two digital modalities through which OWI is conducted, the asynchronous and the synchronous. Sometimes one modality alone is used and sometimes they are mixed. This chapter addresses the digital modalities used in both hybrid and fully online OWI settings described in Chapter 2.

Asynchronicity occurs in a different time setting in that interactions occur with a time lag between and among them. Participants can be geographically distributed or even in the same room, but if they interact in "non-real time," their communication and work is asynchronous. Almost all writing instructors already engage in asynchronous instructional practices when they post course materials to an LMS or respond to individual student emails. Asynchronous OWCs typically enable teachers and students to interact over a longer period of time such as, for example, two days or a week, and they provide wide latitude

with scheduling coursework and interactions. They use such media as text, images, recorded audio, and recorded audio/video.

Synchronicity, on the other hand, occurs in the "same time" setting in that interactions transpire without a time lag in "real time" or with a very short one in "near-real time" (indicating a very short time between interactions as with text-based instant messaging [IM] or short-message service [SMS]). Again, participants can be geographically distributed or located in the same room. Synchronous OWCs typically require teachers and students to be communicating with immediacy, and they must meet at a particular scheduled time for the activity to be genuinely synchronous and equally accessible to all in the course, much as in a traditional onsite course setting. They use such media as text and live audio/video where the participants talk and see each other in real time. However, synchronous OWCs typically also take advantage of asynchronous media for distributing and collecting assignments, providing content, and requiring text-based discussions (Hewett, 2013).

The scholarly literature suggests that successful online teaching and learning are facilitated by "high authenticity … , high interactivity, and high collaboration" (D'Agustino, 2012, p. 148). These components are especially salient in OWI, where vibrant virtual writing communities must thrive in order to meet the requirements of all students for timely and effective feedback together with a sense of real audience, regardless of participant differences in cognition or personality. Phrased another way, in addition to formulating specific, observable, and measurable learner outcomes, when it comes to course construction and implementation, the question that OWI decision makers should ask is not whether either the asynchronous or synchronous option is intrinsically better but rather, as Stefan Hrastinski (2008) stated, "when, why, and how" to deploy both (p. 52). In order to address those deployment questions, this chapter examines the discrete and combined implications of asynchronous and synchronous modalities in the domain of OWI. In so doing, the most relevant OWI principles serve as framing devices and instruments of analysis.

MODALITY OPTIONS, EXPECTATIONS, AND RESOURCES

To set the stage for making informed choices in OWI, we begin with a brief delineation of asynchronous and synchronous modalities in terms of the media and tools they typically use.[1]

Commonly used tools for the asynchronous modality include email, discussion boards, blogs, Wikis, social networking sites, e-lists, and streaming audio or video. Among the frequently identified advantages of using asynchronous technology in OWI are (1) higher levels of temporal flexibility, (2) increased

cognitive participation because of the time allowance for amplified reflection, (3) higher potential to use the increased allowable time for processing information, (4) multiple opportunities to write and read, and (5) the existence of an archival record for transactions conducted in the environment. Yet, asynchronous platforms lack immediacy and thus may contribute to a sense of participant isolation, or what the online education literature would call loss of social presence. Asynchronous pedagogy includes asking students to read the syllabus, assignments, and content for the OWC—in their own timeframe and at their own speed. Students also are asked to write their thinking out in whole-class and peer-group discussions that teachers will read and, hopefully, to which teachers also will respond. Teacher-to-student conferences about the course or as response to written papers tend to happen asynchronously, requiring teachers to construct readable and cogent text and requiring students to read with care to understand the messages (Hewett, 2015a, 2015b). Both students and teachers must go online fairly often to interact; instructors may need to go online more often given their responsibilities to read texts from and write texts for multiple students.

Synchronous tools, by contrast, involve media relative to meeting concurrently through text and voice (i.e., live chat), live document sharing, live audio or video conferencing (both one-to-one and one-to-group), meetings in virtual worlds, and white board sharing. Some synchronous work can occur through the institution's LMS depending on its built-in capabilities, but sometimes outside software are brought to the classroom for this work. Synchronous media's primary advantage typically is identified as interpersonal rather than cognitive, ostensibly owing to participants' feelings of intimacy and real-time engagement, which tend to be associated with student satisfaction, student learning, and lower rates of attrition. Such synchronous interactions can help to avoid miscommunications and to address problems when miscommunication has occurred. Nevertheless, synchronous media can create significant scheduling challenges particularly if the teacher wants to speak with the entire class, but even for one-to-one interactions. Additionally, synchronous media/software can be costly and may require significant bandwidth to be efficient and effective. Relative to OWI Principle 1 (p. 11), they may be challenging to provide in terms of student access unless the LMS offers the necessary accessible portals; even then, some students will not have the video or audio capacity using their home computers and on-campus computer labs.

Table 3.1 outlines some of the tools that the asynchronous and synchronous modalities use in OWI settings. It is worth noting that asynchronous OWCs by their nature typically take advantage only of asynchronous media while synchronous OWCs may take advantage of both asynchronous and synchronous media.

Table 3.1. Example asynchronous and synchronous tools

Asynchronous Tools	Synchronous Tools
• Email	• Text-based chat
• Discussion/message boards	• Voice-based chat, to include the phone
• Blogs	• Audio and/or video conferencing
• Social media sites	• Web conferencing
• Listservs	• Virtual worlds
• Streaming audio or video	• Whiteboards
• Wikis	• Real-time document sharing (e.g., Google Documents)
• Non-real-time document sharing (e.g., Google Documents)	

   Presently, asynchronous resources seem to be more widely used with on-line learning, in large part because the implementation barriers are lower. According to empirical evidence, that preference apparently holds true for OWI, but it seemingly varies with the selected tool. For instance, the fully online distance-based survey results gathered by the CCCC OWI Committee in 2011 indicated that 93.8% of the surveyed faculty relied on asynchronous discussion; regarding the asynchronous tools used, however, only 10.1% employed blogs, 7.9% took advantage of Wikis, and 5.3% used social media sites, some of which have synchronous affordances (CCCC OWI Committee, 2011a). For the OWI hybrid survey findings, the figures were 78% for asynchronous discussion, together with 13.9% for blogs, 10.3% for Wikis, and 3.5% for social networking sites (CCCC OWI Committee, 2011b). Those survey data suggest that asynchronous modalities are more frequently used in OWI, but not why. Possible reasons include the general capabilities of most LMSs as they are configured for higher education disciplines, which may be an issue of cost, and the degree to which teachers value or are prepared to use asynchronous tools in their OWCs. The potential for choosing and using one modality over *or* with the other is nuanced. In *Preparing Educators for Online Writing Instruction*, Beth L. Hewett and Christa Ehmann (2004) observed that "asynchronous writing instruction looks very familiar to instructors," in terms of their experience with providing written response to student papers whereas "synchronous writing instruction can be highly useful," yet "tricky in that it requires highly developed verbal teaching skills and vocabulary about writing along with strategies for encouraging students to commit to writing out their thinking" (pp. 116-117). A few years later, Scott Warnock (2009) noted in *Teaching Writing Online* that "having an asynchronous textual presence" is foundational in OWI (p. 2).

In the early stages of OWI course formulation, it is essential to consider the ramifications of multiple variables, not the least of which are the choice to use asynchronous and synchronous modes. To do so well requires closely interrogating the expectations and resources of stakeholders in order to balance practical and pedagogical concerns, with the key cohorts being students, instructors, WPAs, and relevant information technology (IT) representatives from the institution. For instance, data gathering and discussions could help course designers determine the feasibility and thus allocation of asynchronous and synchronous tools. On this point it is worth noting that the CCCC OWI Committee's nationwide surveys (2011a & 2011b) indicated that many OWI teachers inherited a course design or interface, while others worked to configure their own course—typically within the confines of a previously selected LMS. Yet, in the interests of outcomes, orientations and workshops could facilitate conversations about pedagogical expectations and available resources. For example, if instructors or WPAs think it is essential for students to share full drafts of their papers while conversing about them in real time, but the IT personnel state that campus infrastructure will not reliably support Web conferencing or that students may not have such access, then text-based chat may become the necessary synchronous platform of choice. This decision and others like it should be reinforced by a clearly articulated rationale for how a modality enhances the teaching of writing as well as how such a choice enhances access and inclusivity, per OWI Principle 1 (p. 7).

Selecting a modality for an OWC could be facilitated by surveying the students as the course's primary audience. According to Janet C. Moore (2011), Chief Knowledge Officer at the Sloan Consortium, "clear expectations help manage the volume and quality of interaction" that promote effective learning online (p. 97). With that in mind, surveys could invite students to share information about their own resources and levels of expertise that would assist in selecting an institution's LMS or choosing between asynchronous and synchronous modalities when creating an OWC, while sessions and materials that outline policies, processes, rights, and responsibilities would provide a touchstone for support before and throughout a course. Such training is entirely consistent with OWI Principle 10, which stated that "students should be prepared by the institution and their teachers for the unique technological and pedagogical components" of online writing (p. 21). Taking all stakeholder groups into account, the following are fundamental questions to help identify expectations and resources related to choosing asynchronous and synchronous modes for teaching and learning writing online. Only after gathering and assessing this information can one make solid decisions about specific media, tools, and online instructional techniques.

1. **Students:** To what extent do you need technical assistance accessing asyn-

chronous materials from the institution's LMS? Do you own a computer camera and/or microphone for participating in synchronous chat, video, or audio exchanges? To what extent would you need additional access or technical assistance for participating fully in synchronous chat, video, or audio exchanges? Describe the technical profile of your primary and secondary connectivity sources. If you use assistive technology, please describe what it is and what you know about its connectivity to the campus chat, audio, and video.

2. **Instructors:** To what extent do you need technical assistance accessing asynchronous materials from the institution's LMS? Do you own or have available a computer camera and/or microphone for participating in synchronous chat, video, or audio exchanges? To what extent would you need additional access or technical assistance for participating fully in synchronous chat, video, or audio exchanges? Describe the technical profile of your primary and secondary connectivity sources.

3. **Institution:** To what extent are you able to provide access to asynchronous and synchronous modalities through the institution's LMS? To what extent are you able to offer an initial technological orientation and ongoing 24/7 technical support to students and instructors in both hybrid and fully online OWCs? To what extent are you able to offer workshops on key techniques for teaching and learning writing online? To what extent are you able to provide additional access to students with physical disabilities, learning challenges, multilingual backgrounds, or socioeconomic challenges? Do you have resources for describing asynchronous videos for visually challenged students? What arrangements do you have for live captioning in synchronous meetings?

INTERACTION AND COMMUNITY

Chapters 1 and 2 made clear the importance of connectedness among participants in an online writing environment. Connection, in fact, is at the core of OWI Principle 11, which asserts the need to develop "personalized and interpersonal online communities to foster student success" (p. 23). As scholars have suggested, digital connectedness is correspondingly accompanied by challenges (see, for example, DePew, Spangler, & Spiegel, 2013). However, with a teaching focus on process and revision, writing instruction even in onsite environments has always confronted the dynamic nature of knowledge construction through alphabetic text, and writing instructors, therefore, bring a wealth of disciplinary knowledge that can help inform community-building online. Indeed, the recent focus on flipping the classroom for more interactivity and individualization is

a relatively old practice in writing pedagogy, and many writing faculty have years of experience designing activities that enhance interaction; these activities include group tasks that balance guided, scaffolded prompts with the need to allow for wandering and depth in discourse. Administrators responsible for OWI training, then, would be well advised to foreground and tap into that existing knowledge, as it will help instructors to make effective choices about how to employ asynchronous and synchronous modalities that lead to online interconnectedness, while emphasizing the pedagogical nature of such choices over mere technological feasibility.

Despite such experience, as reports amass documenting and sometimes championing the swift shift toward online learning in higher education (Allen & Seaman, 2013), instructors may experience uncertainty about their ability to adjust to new modalities for delivery, and as a result, they may feel breathlessly squeezed by this convergence. WPAs who shepherd OWI teachers from "face-to-face" to hybrid or fully online environments not surprisingly may encounter a range of attitudes and levels of preparation for that shift.

Veteran writing faculty who express anxiety about moving to OWI should be reassured that they already possess a foundational familiarity with asynchronous and synchronous modes. By definition, face-to-face teaching is primarily synchronous because onsite classroom activities happen in real time, and instructors accordingly develop methods and preferences for managing such exchanges informed by their training and course learning objectives. Such synchronicity and onsite, face-to-face interactions are a significant part of hybrid OWI, as Jason Snart discusses in Chapter 2. Beyond face-to-face interactions, digital synchronicity also uses the common qualities of talk and turn-taking whether accomplished through oral talk or text-based chat. Moreover, these same instructors use asynchronous communication increasingly often through their institution's LMS to exchange such digital products as syllabi, assignment descriptions, essays, and assessments. This experience means that writing faculty can by default follow the recommendation outlined in OWI Principle 4 that "appropriate onsite theories, pedagogies, and strategies should be migrated and adapted to the online instructional environment" (p. 14). The challenge is to transfer that experience with an awareness of the nuances of the online medium.

On the other end of the spectrum, less-seasoned writing teachers might possess competence with asynchronous and synchronous digital technologies, yet they may not have thought critically about how to transfer that aptitude for teaching purposes. In this case, teachers with technological expertise run the risk of assuming that students share that fluency and access. OWI administrators might, as a precaution, require these teachers to articulate a clear rationale for each technology they propose to use and to run an assessment that lists the risks

of those tools given the potential challenges to students, along with possible adaptations and accommodations. The imperative to anticipate and thus avoid frustrations over digital technology that can spread from instructors to students—breeding discontent and distraction in online settings—is part of what animates OWI Principle 7, which stated that "online writing teachers should receive appropriate OWI-focused training, professional development, and assessment for evaluation and promotion purposes" (p. 17). While it might not be feasible to consider all potential challenges and solutions, thinking through these possibilities will better prepare instructors for their online teaching duties.

In considering challenges and solutions, OWI instructors would be well advised to consider the implications of shifting from asynchronous to synchronous modalities or vice versa. Even when an LMS offers primarily asynchronous over synchronous media, for example, it is possible to switch modalities in the interest of assisting students, individually or collectively. For example, if a student is in danger of failure or if she expresses uncertainty or frustration, the teacher can connect with her synchronously via text (IM chat) on the LMS, in a Web conference using the LMS or free software, or with the telephone, which is accessible to almost all students. Switching modality and/or medium enables reconnection and forward movement. Considering when to reverse modalities or when to use both modalities in order to meet different learning styles and objectives is probably the best way to prepare for all students to participate fully and fairly in online coursework. Not only that, but instructors should work with their institutions to compose documentation for novice student users of required course technologies; if, in so doing, they conclude that possible discomfort among students is of a certain magnitude, the problematic tools should be abandoned for ones that requires less knowledge or management.

Kevin Eric DePew & Heather Lettner-Rust (2009) posited that if synchronous communication is the default delivery mode in the onsite classroom, the asynchronous mode plays that role online. They observed that historically, distance education was designed primarily to allow students to pace themselves, asynchronously interacting with instructors through the postal service initially and through digital tools more recently. But champions of distance education, then and now, have sometimes been motivated by efficiencies and not pedagogical value, and OWI stakeholders should be cautious of approaches that do not align with the recommendations of such leaders in the field as the Sloan Consortium. With that said, while the asynchronous modality is currently dominant in OWI, a movement to develop more affordable, reliable, and efficacious synchronous tools suggests that the latter could become a more significant feature on the OWI landscape. Synchronous platforms may well offer new pedagogical opportunities and challenges, which teachers and researchers should continue

to explore and research. This exploration is part of OWI Principle 3's message: "Appropriate composition teaching/learning strategies should be developed for the unique features of the online instructional environment" (p. 12). Nevertheless, mere access to tools should not be the guiding force in using them. On the contrary, understanding the advantages and limitations of asynchronous and synchronous resources for teaching writing is a *sine qua non* for OWI stakeholders, who are the focus of the next section.

ACROSS THREE DIMENSIONS

The emerging consensus regarding the choice of asynchronous and synchronous modes is that neither is inherently better, but that they complement one another and should be employed after considering the instructional and rhetorical situation of each activity in an OWC (Hewett, 2013). This observation invokes the previously mentioned questions of when, why, and how to deploy these modalities to advance OWI. The following discussion examines three dimensions across which asynchronous and synchronous options can be compared to determine which are suited for a particular situation: inclusivity and accessibility, technical viability and IT support, and pedagogical rationale. The order is significant here for the first two are practical and must be addressed before moving on to the third. To state the obvious, if students or instructors cannot participate fully in the life of the course or if the technology sets up access roadblocks the IT support cannot address, that course should be redesigned until the obstructions are removed. Table 3.2 and the following discussion provide a comparative overview given these dimensions.

INCLUSIVITY AND ACCESSIBILITY

OWI Principle 1 rightly declared that "online writing instruction should be universally inclusive and accessible" (p. 7). This overarching need has profound implications for course design and execution, and Section 3, "Practicing Inclusivity," offers extensive theoretical and practical insight on the issue. In this chapter, however, the emphasis is on inclusive and accessible design as a dimension of asynchronous and synchronous modalities. Broadly speaking, asynchronous approaches afford students time to use adaptive technologies that remediate physical, cognitive, or linguistic challenges. For example, research suggests that persons with Autism spectrum disorders might work best in such asynchronous modes as email (Wyatt, 2012). Similarly, Hewett (2000, 1998) suggested that students with audio-processing disorders might fare better in online, text-based peer groups, while students with certain kinds of writing disabilities might

Table 3.2. Modality dimensions, strengths, and challenges for OWI

Modes	Dimensions	
Dimension One: Inclusivity and Accessibility	STRENGTHS	
	• Typically text-based interactions use common literacy skills. • Research available on how to ensure that OWI works for everyone, minimizing disparities due to technological access. • Time lag affords students the opportunity to employ assistance related to disabilities, such as typing aides or submitting responses in approved alternative media.	• Enables voice and live video connections to accompany an environment that typically is text-rich. • Accommodates learning styles that rely on immediate feedback and real-time visuals. • Many tool types available through universal access or embedded institutional cost structures, meaning that no additional fee/s required.
	CHALLENGES	
	• Typically text-based interactions require strong reading and writing skills, which may be problematic for students with particular learning or physical disabilities. • Instructors and designers must have access to the latest research on design for inclusivity and must be able to use platforms that support the deepest accommodations. • Instructors and designers must receive information on accessibility issues from students with enough time to address solutions, so cooperation with institutional partners addressing accessibility needs is essential.	• Some versions require voice and live video connections that may impede students who interact more comfortably through text or who cannot afford such connections. • Speed of communication could impede participation of students or instructors with disabilities. • Speed of communications could impede participation by those challenged by low-bandwidth and connectivity. • Certain communication interfaces are not designed to interact well, if at all, with software that facilitates communication for students or instructors with physical disabilities.
Dimension Two: Technical Viability and IT Support	STRENGTHS	
	• Technical support is typically built into the major providers on campus and in the public domain; platforms have been around long enough that crowdsourcing and on-campus assistance can often address concerns.	• If using popular institutional or universal access platforms, IT support should be familiar with common problems.

Dimension Two: Technical Viability and IT Support	CHALLENGES	
	• Timely, skilled technical support from institutional IT and software designers is essential to maintaining reliable service with full capabilities.	• IT support might not be available when assistance is needed if students and teachers interact outside business hours or if funding for support services does not meet demand.
Dimension Three: Pedagogical Rationale Permanence Pace Scale Social Impact	STRENGTHS	
	• Most LMS and public platforms have recording tools to capture exchanges for future consideration. • Intermittent communication process allows time for deeper thought and construction of response at pace determined by instructor and students. • Exchanges are easily scalable to individual, whole class, or targeted group; scale is flexible from one-on-one to thousands in a MOOC. • Social exchanges related to building relationships and addressing concerns can be carefully constructed as participants have time to consider and compose such interactions.	• In a smaller class or within small groups, accommodates time-sensitive social and relational functions such as: (1) exchanges that help establish identity and personal connection, and (2) exchanges that facilitate planning for such activities as group work.
	CHALLENGES	
	• Pace does not easily allow for fluid, time-sensitive social and relational acts, such as (1) exchanges that help establish identity and personal connection, and (2) exchanges that facilitate planning for such activities as group work.	• Exchanges might not be recordable due to limitations in technology or storage capacity; therefore, they may not be reviewable for deeper consideration or ongoing use. • Privileges speed over care for grammatical correctness or depth of thought. • Capacity for direct participation is limited with multiple students. • Ability to respond quickly could facilitate uncensored and careless comments that degrade social fabric.

accomplish peer group work more efficiently and effectively in synchronous or onsite settings. Likewise, in an especially text-rich setting like the asynchronous modality where nearly all exchanges are text-based, students can benefit from consistently reading and writing, but students with particular learning styles may flounder when their reading or writing skills—although rightly challenged by the mode—are weaker than needed (Hewett, 2015a). In such cases, real-time talk may provide students with necessary relief and added capacity for under-standing. Although researchers need to continue to research the access issues related to asynchronous tools, there remains a potentially greater challenge in reaching full and fair standards for OWI participation with synchronous options. The synchronous modality can provide a vehicle for meaningful student involvement in OWI, such as oral discussion and real-time document sharing to complement less dynamic textual interchange. This potential notwithstanding, in terms of socio-economic stratification, to raise just one dynamic, the continuing digital divide confirms that many students still have hardware, software, and bandwidth impediments that make more advanced connections such as Web conferencing difficult if not impossible for taking an OWC.

TECHNICAL VIABILITY AND IT SUPPORT

The second dimension is technical viability and IT support, which resonates with OWI Principle 2 that an "online writing course should focus on writing and not on technology orientation or teaching students how to use learning and other technologies" (p. 11). OWI Principle 13 also is relevant in stating the "students should be provided support components through online/digital media as a primary resource; they should have access to onsite support components as a secondary set of resources" (p. 26). That is, course expectations and learning objectives need alignment to available infrastructure, with IT staff available to address students' and instructors' difficulties directly. This need can be appreciated in the CCCC OWI Committee survey (2011a) of fully online distance-based courses, where instructors named "technical problems" as one of their most challenging areas. It is reasonable to conclude that robust asynchronous and synchronous training and—in particular—IT support would free instructors to focus their priorities on teaching or tutoring writing. Even so, Hewett and Ehmann (2004) noted that "asynchronous instruction tends to be less costly and simpler to develop than synchronous instruction" (p. 69). With that understood, the attempt to minimize expenses and technical problems may manifest in the form of avoiding synchronous tools in the teaching and learning of writing online, as these are typically associated with more technical problems—or at least more panic-inducing problems. Yet, if time and experience are helping to address issues with asynchro-

nous tools, the same will in all likelihood eventually arrive for synchronous feature sets as well. Until then, WPAs or instructors seeking to reduce uncertainties in OWI will probably continue to use well-established asynchronous tools for the majority if not all of their course needs. Although understandable, this represents a concern to the field if, as discussed in the next section, there are pedagogical reasons for using both modalities.

PEDAGOGICAL RATIONALE

Issues of inclusivity and accessibility together with technical viability and support must be resolved in order for OWI to be successful. However, these two dimensions will be of dramatically less consequence if OWI instructors and administrators do not ascertain the pedagogical merits of asynchronous and synchronous modalities. Below, therefore, are comparative analyses of those modes according to four metrics: permanence, pace, scale, and impact.

Permanence

As noted earlier, asynchronous communication entails the intermittent exchange between sender and receiver during which the receiver, at a time of his or her choosing, actively retrieves the former's message to complete the communication thread. Given the nature of asynchronous tools, in particular those housed in a course LMS such as discussion boards, these interactions are more likely to create an archived record of exchanges, which can be highly useful for participants to refer to later. For instance, from the students' perspective, that archive assists with essay revision by permitting a return to teacher, peer, and tutor recommendations on an earlier version of the document. With regard to OWI faculty, the record created through automatic saving and digital archiving offers, among other things, information on student engagement with one another as well as with the course materials, which may be pedagogically useful for identifying outliers who are not fully invested in or perhaps are unclear about the nature of course assignments and processes. While quantity of time spent is no substitute for quality of time, and one cannot be certain that these measures of quantity are precisely accurate, such elements do add information to an instructor's understanding of students' asynchronous performance.

In contrast, synchronous communication can be defined as the near immediate (with simultaneous potential), interactive exchange of messages between sender and receiver. Not surprisingly, creating permanence in this mode is often far more complicated than in asynchronous discourse. Typically, participants must turn on recording devices for synchronous exchanges and ought to have the permission of all parties to do so since recording might not be the default

setting. Furthermore, while some chat, whiteboard, and voice conferencing tools have the option of recording, a challenge may be the generally large synchronous file size that requires capture and storage capacity. If synchronous interactions in OWI cannot be recorded, participants are obliged to rely on notes and memories, which is the very method they would employ in an onsite classroom. What might be gained from a technologically mediated synchronous interchange that facilitates robust, expressive interaction—complementing communicative intentions through such kinetic acts as body gestures, facial reactions, and tone of voice— could be offset by the inability to revisit these encounters for future review. That is obviously consequential when, for example, it comes to feedback during an essay writing invention session online. Analyzing recorded text-based chat in their class on argumentation, Leena I. Laurinen and Miika J. Marttunen (2007) noted that "chat debates in computerised [*sic*] learning environments can easily be stored, which opens up a possibility for reflecting on debates later on, and students can use them as source material for the further development of their ideas," such as by using the text of the chat to create "argumentation diagrams" (p. 244).

Pace

The conventional dynamic in asynchronous communication is, broadly speaking, self-paced, thereby both accommodating learning differences and allowing cognitive room for the careful construction and understanding of content. Pace represents a core affordance for online instructors of writing who teach and assess a variety of written student products, for it gives students the opportunity to draft and revise in ways that reflect their deepest understanding of writing and rhetorical precepts. Whether the task is a two-hundred word post at a course blog or a two-thousand word thesis-driven argument, the students' asynchronous tempo for writing and talking through writing can be conducive to thoughtfulness and polish.

Regarding synchronous communication, on the other hand, pace is both its strength and challenge. Hrastinski (2008) asserted that the synchronous modality is especially suited to secondary, lighter objectives, including "discussing less complex issues, getting acquainted, and planning tasks" (p. 54), but he explained that students are nonetheless highly motivated to participate in synchronous discussions because they know that responses happen rapidly. Hewett (2006) and Hewett and Ehmann (2004) indicated differently that synchronous conferences represent an ideal modality for discussing singular issues of importance like brainstorming an idea or taking a concept and working it into a thesis.

Of course, synchronous interactions can be equated with "quick" responses (Hrastinski, 2008), and such immediate responses are not always carefully considered. The OWI setting is no exception. Poorly prepared or unfiltered "knee-

jerk" answers easily could diminish the value of a lively session on any facet of the writing process. Pace is moderated by medium, as well. For example, synchronous voice interactions are more quickly responsive than text-based IM chat. The latter becomes threaded and convoluted even between two participants who think and type at different rates. With that said, many students who have grown up immersed in online communication are likely to be at least familiar with, if not thoroughly comfortable at, a synchronous pace, and instructors should consider how those exchanges could be integrated into the class ecology.

Scale

A seminal aspect of asynchronous modalities is that they allow instructors the latitude to scale the provision of material to individuals, groups, or the whole class. Simply stated, email and other documents are as readily delivered to one student as to every student. Warnock (2009) described how years of experience have led him to rely on asynchronous communication for its reliability and inclusivity, allowing even quieter students to be involved, in contrast to synchronous discourse, which he describes as "fairly linear, almost always meaning that not everyone can participate" (pp. 69-70).

In comparison, perhaps the most restrictive aspect of synchronous resources is the criterion of scalability. Just as large class size inhibits active participation by all members in onsite settings, digital synchronous tools have an inherent ceiling for authentic interaction. Instructional technologists, however, are playing with the power of synchronicity in promising ways. Such play can be innovative, if dicey for OWI, as one Coursera MOOC designed for a composition course demonstrated.[2] Its purpose was to offer a sense of simultaneity to its hundreds of participants who nevertheless could not all interact with the instructor at once. A strategy was to schedule live lectures that students could attend in real time or watch recorded thereafter. This synchronous experience was one-directional as students could not insert questions into the lecture; they could, however, join in the course's chat-based discussion areas while watching the lecture. Another synchronous experience for this group was a series of live video-conference writing workshops comprised of the instructor and a handful of students who were selected from a pool of course applicants; the rest of the MOOC students could watch the workshops live or recorded later. OWI Principle 15 calls for "ongoing research" by administrators and teachers (p. 31), and that is very much needed if synchronous options are to be made scalable for purposes of OWI.

Impact

One of the most significant critiques of online learning is that too often neither instructors nor students indicate that they have forged satisfying relationships

with one another. In relation to this phenomenon, the CCCC OWI Committee (2011a) found in its research that instructors in fully online distance-based courses emphasized the importance of actively nurturing engagement with students, noting that "courses do not run by themselves," but instead require careful attention to connection and community. The symptoms of low levels of impact are clear in, among other ways, the high attrition rates associated with online courses compared to their face-to-face or blended counterparts (Dziuban, Hartman, & Moskal, 2004). Many scholars have addressed this issue, and it is the reason why OWI Principle 11 asks instructors and their institutions to attend to the potential associative power of online communities (p. 23). Asynchronous modalities can and do contribute to the ties that bind course participants, in ways such as reflective blog postings shared in class space, member profiles, and open discussion areas that invite more playfulness and self-sponsored participation (Kear, 2011). Instructors, too, can and should perform "immediacy behaviors" (Arbaugh, 2001, p. 43) by, for instance, stepping into student discussions at appropriate times to confirm they, too, are part of that constitutive community.

Even so, it is probably in the area of impact that synchronous resources hold the greatest promise for shaping the quality of future OWI, as these platforms are especially vital in helping to establish and sustain an immediacy of "social presence," a feeling among course participants that real people are connecting even though they are geographically distributed. Synchronicity in OWI most naturally echoes the call and response of face-to-face conversation and animates, according to Hewett (2010), the "turn-taking, spontaneity, and relatively high degrees of interactivity" that forge social connectedness (p. 25). In peer review, to cite one example, a student-to-student chat can facilitate the critique through shared greetings that personalize the activity and establish goodwill and camaraderie in a difficult task. Proponents and practitioners of OWI alike should take note that many comprehensive strategies for developing deeper relationships in online courses include some type of synchronous communication, whether it is through phone calls, chat, or face-to-face meetings. Indeed, the CCCC OWI Committee (2011a) survey of fully online courses found that faculty at every position level agreed that "even with OWI, face-to-face interaction with students is important" (p. 8). Thus, while synchronous communication might constitute a smaller percentage of course time, it is nonetheless an integral component to developing a successful pedagogical strategy in the online teaching and learning of writing.

CONCLUSION AND RECOMMENDATIONS

While asynchronous feature sets have been and currently remain dominant

with regard to OWI course infrastructure, under certain conditions, the evolution of hardware and software makes synchronous platforms a desirable option for particular OWI purposes (e.g., facilitating rapid conversational exchanges that establish the social presence necessary for honest but encouraging peer writing workshops online). In the future, advances in bandwidth and increases in access to greater connectivity are likely to make synchronous activities more accessible to OWI teachers and students, but OWI instructors and administrators still will need to assume responsibility for ensuring adequate access for all students.

Although the two modalities and their ability to be used separately or together in an OWC may not change, the media and tools developed for asynchronous and synchronous uses will continue to develop. To this end, the advantages of differentiated instruction means that instructors should continue to use available media and tools from both modalities thoughtfully and with access as an upfront value, just as they should do in the traditional face-to-face classroom. Furthermore, instructors should have a clear pedagogical rationale for using asynchronous or synchronous communication in OWI (Hewett, 2013). The following list of recommendations may help WPAs and teachers in making their decisions about digital modality for their OWCs.

- For accessibility purposes, survey students, instructors, and institutions about available modality and media.
- Survey students regarding their comfort levels with any social media and interactions built into the course, enabling those with invisible disabilities to express their social needs.
- Ensure 24/7 or otherwise sufficient IT support of both asynchronous and synchronous modalities for all instructors and students.
- Use asynchronous tools for a wide range of course-critical tasks, and take advantage of synchronous tools as needs and resources permit.
- Upon confirming student access, use asynchronous and synchronous modes to appeal to different learning styles and for specific pedagogical purposes.
- Ensure that the students and instructor have backup access on campus or elsewhere (or another backup plan) in case connectivity is lost or severely downgraded.
- Confirm that synchronous tools have recording capacity and ensure that students use that feature to document course interactions.
- Create a course "social contract" that identifies expectations for civil discourse to be followed by the students and instructor, and convey whether those expectations differ according to modality.

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NOTES

1. For more information, see the Rogers et al., 2009, *Encyclopedia of Distance and Online Learning*; see also Hewett, 2013.

2. Hosted at Duke University, "English Composition I: Achieving Expertise" was taught by Denise Comer. The course ran roughly March-June, 2013, and it was attended by Connie Snyder Mick.

REFERENCES

Allen, Elaine & Seaman, Jeff (2013). *Changing course: Ten years of tracking online education in the United States*. The Sloan Consortium. Retrieved from http://sloanconsortium.org/publications/survey/changing_course_2012

Arbaugh, J. Ben. (2001). How instructor immediacy behaviors affect student satisfaction and learning in Web-based courses. *Business Communication Quarterly, 64*(4), 42-54.

CCCC OWI Committee for Effective Practices in Online Writing Instruction. (2011a). *Fully online distance-based courses survey results*. Retrieved from http://s.zoomerang.com/sr.aspx?sm=EAupi15gkwWur6G7egRSXUw8k-pNMu1f5gjUp01aogtY%3d

CCCC OWI Committee for Effective Practices in Online Writing Instruction. (2011b). *Hybrid/blended course survey results*. Retrieved from http://s.zoomer-ang.com/sr.aspx?sm=%2fPsFeeRDwfznaIyyz4sV0qxkkh5Ry7O1NdnGH-CxIBD4%3d

Conference on College Composition and Communication. (2004). *CCCC Position statement on teaching, learning, and assessing writing in digital environments*. Retrieved from http://www.ncte.org/cccc/resources/positions/digitalenvironments

D'Augustino, Steven. (2012). Toward a course conversion model for distance learning. *Journal of International Education in Business, 5*, 145-162.

DePew, Kevin E. & Lettner-Rust, Heather. (2009). Mediating power: Distance learning, classroom epistemology and the gaze. *Computers and Composition, 26*, 174-189.

DePew, Kevin E., Spangler, Sarah, & Spiegel, Cheri L. (2013). Getting past our assumptions about Web 2.0 and community building: How to design re-

search-based literacy pedagogy. In Marohang Limbu & Binod Gurung (Eds.), *Emerging pedagogies in the networked knowledge society: Practices integrating social media and globalization* (pp. 120-143). Hershey, PA: IGI Global.

Dziuban, C., Hartman, J., Moskal, P., Sorg, S., & Truman, B. (2004). Three ALN modalities: An institutional perspective. In John Bourne & Janet C. Moore (Eds.), *Elements of quality online education: Into the mainstream* (pp. 127-148). Needham, MA: Sloan Center for Online Education.

Hewett, Beth L. (2006). Synchronous online conference-based instruction: A study of whiteboard interactions and student writing. *Computers and Composition, 23*(1), 4-31.

Hewett, Beth. L. (2010). *The online writing conference: A guide for teachers and tutors.* Portsmouth, NH: Boynton/Cook.

Hewett, Beth L. (2013). Fully online and hybrid writing instruction. In H. Brooke Hessler, Amy Rupiper Taggart, & Kurt Schick (Eds.), *A guide to composition pedagogies* (2nd ed.). (pp. 194-211). Oxford, UK: Oxford University Press.

Hewett, Beth L. (2015a). *Reading to learn and writing to teach: Literacy strategies for online writing instruction.* Boston: Bedford/St. Martin's Press.

Hewett, Beth L. (2015b). *The online writing conference: A guide for teachers and tutors.* Updated. Boston: Bedford/St. Martin's Press.

Hewett, Beth L. & Ehmann, Christa. (2004). *Preparing educators for online writing instruction: Principles and processes.* Urbana, IL: National Council of Teachers of English.

Hrastinski, Stefan (2008). Asynchronous & synchronous e-learning. *EDUCAUSE Quarterly, 4*, 51-55.

Johnson, Genevieve Marie (2006). Synchronous and asynchronous text-based CMC in educational contexts: A review of recent literature. *TechTrends, 50*, 46-53.

Kear, Karen L. (2011). *Online and social networking communities: A best practice guide for educators.* New York: Routledge.

Laurinen, Leena I. & Marttunen, Miika J. (2007). Written arguments and collaborative speech acts in practising the argumentative power of language through chat debates. *Computers and Composition, 24*(3), 230–246.

Moore, Janet C. (2011). A synthesis of Sloan-C effective practices. *Journal of Asynchronous Learning Networks, 16*(1): 91-115.

Rogers, Patricia, Berg, Gary, Boettcher, Judith, Howard, Caroline, Justice, Lorraine, & Karen Schenk, Karen (Eds.). (2009). *Encyclopedia of distance and online learning* (2nd ed.). Hershey, PA: IGI Global.

Warnock, Scott (2009). *Teaching writing online: How and why.* Urbana, IL: National Council of Teachers of English.

Wyatt, Christopher S. (2010). Online pedagogy: Designing writing courses

for students with autism spectrum disorders (Doctoral dissertation, University of Minnesota). Available from ProQuest Dissertations and Theses database. Retrieved from http://search.proquest.com.libproxy.usc.edu/docview/597211269?accountid=14749 (597211269)