# THE LANDSCAPE OF MERGING MODALITIES

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**On today's higher education campus, there are likely a dozen new terms being used to describe different configurations around the modality of courses. *Modality* typically refers to the location and timing of interactions. What used to be a simple binary of *face-to-face* or *online* has now become so extremely complex that our ability to understand each other is impaired.**

## History of Modality

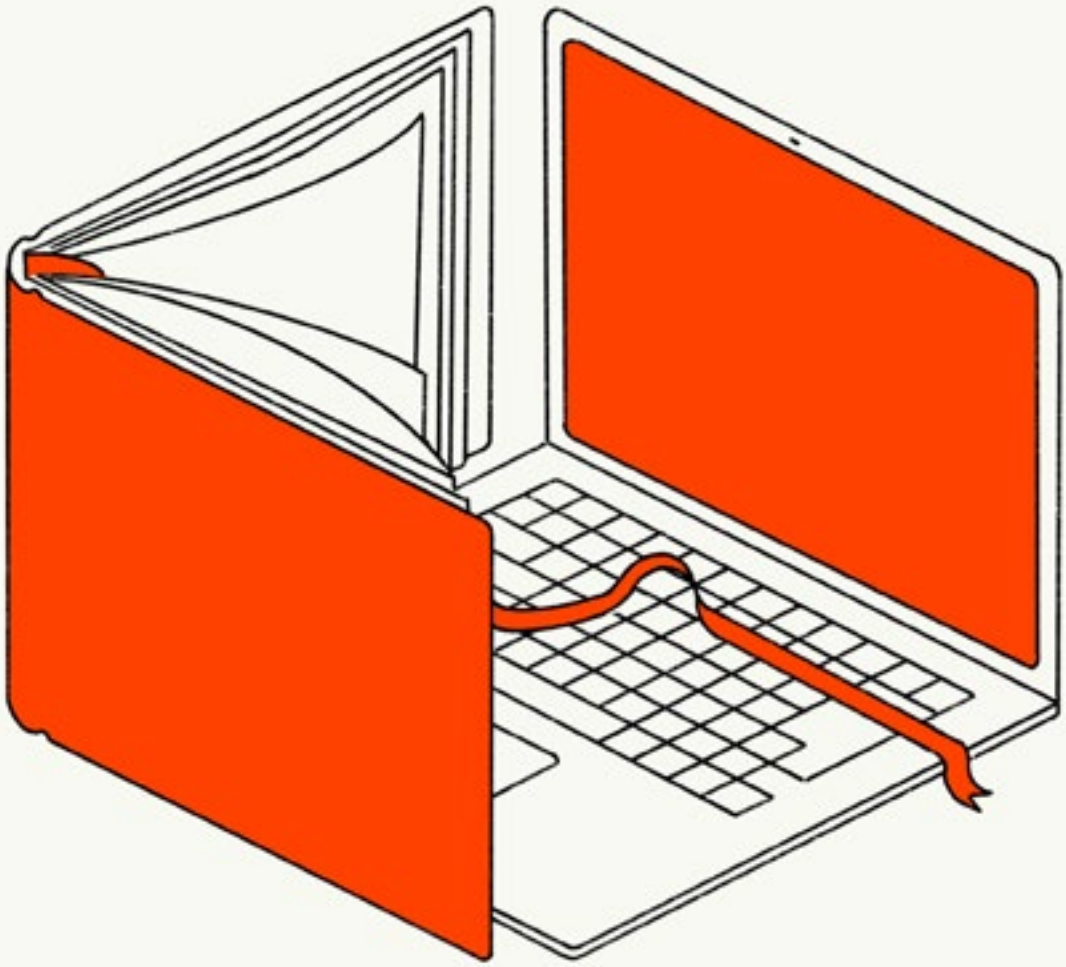
In the early, simpler days of online teaching and learning, somewhere in the middle of the 1990s (not including radio or written correspondence courses), the lack of high-speed internet limited communication primarily to text. *Online* meant only one thing: text-based, *asynchronous* learning. In asynchronous learning, communication is *not* happening at the same time or "live." Instead, it is time-delayed through tools such as email, static websites, and forums, albeit sometimes these were supplemented with the random image and some manual emoticons :-). This learning was also openly accessible by default, a fact that got lost somewhere along the way, but we have been finding our open origins again in the last decade. *Blended learning* emerged in North America as a term to refer to the mix of on-campus/face-to-face learning and online activities. This learning was typically referred to in a consecutive manner: instructional hours were reduced to allow for online interactions, or those online interactions were seen as supplemental to the face-to-face experience. In other parts of the world, such as Australia, *hybrid learning* was the equivalent term for blended learning, so the two have been synonyms for decades.

The mid-1990s was the last time these terms were comprehended with simplicity. In the late 1990s, as residential internet speed increased along with the sophistication of personal hardware, we also saw the emergence of web-based software that enabled *synchronous* communication. Interactions could now happen "live," such as via a phone call. Learners were able to gather around a shared online slideshow where disembodied voices could take turns asking questions or sharing commentary. As some online-only courses began to integrate synchronous learning into the asynchronous courses, the term *blended online learning* later emerged—creating the first layer of semantic confusion.[1]

Further advances around the turn of the millennium brought in videoconference

rooms, where classes could connect to each other using "codecs." (Individuals did not have this capability on their home computers, however, since those were desktop setups, with slow components.) This was the first opportunity to connect face-to-face groups together via video over the internet. It was "point-to-point" in nature, but two or more face-to-face classrooms were able to connect with each other. There was no fancy term to describe this: just "videoconferencing in education" or "synchronous distance education." One example of classrooms connecting in this way was the Rural Advanced Community of Learners (RACOL) in Alberta, Canada.[2]

In the mid-2000s, the next leap that occurred was major: new software enabled personal laptops or desktops to connect directly to room-based videoconferencing systems. Where there was strong and stable internet available, this allowed individuals anywhere in the world to connect to videoconference rooms, transforming them more fully into *video-enabled classrooms*. The point-to-point leash had been broken, and the possibilities were limitless for merging modes for learning and including groups on campus, remote groups, and dispersed remote individuals. The merging of modes had now become enmeshed. The challenge was describing it—to administrators, to learners, and in the research literature. The result of the merged modes was not face-to-face or online learning. It also was not blended (hybrid) learning. The result was a combination, with varying mixes of who controls the modality.



## Merging Modality Terminology

New terms emerged in the late 2000s to try to capture the phenomenon of the merging modes. Table 1 presents a matrix to provide an overview of four main terms. Note that this is a "best effort" and exceptions may exist.

The *HyFlex* (hybrid-flexible) model was developed by Brian Beatty in his graduate courses at San Francisco State University and introduced at the 2007 Annual Convention of the Association for Educational Communications and Technology. Beatty described the model as a combination of hybrid, which we know as combining both online and face-to-face modalities, and flexible, where "students may choose whether or not to attend face-to-face sessions."[3] The specific characteristic here is that the learners have full control of their modality (face-to-face, online synchronous, or online asynchronous), which often is not the case in educational settings where modality is merged. This limits the applicability of the term in that it cannot be applied to courses where synchronous attendance is required. It also cannot be applied to programs where the number of learners who can participate in person or online synchronously is limited or where there is no robust asynchronous option provided at all. HyFlex has gained significant attention beyond the research literature in response to the COVID-19 impact on campuses; however, it is likely that many of the implementations are not, in fact, true HyFlex designs.

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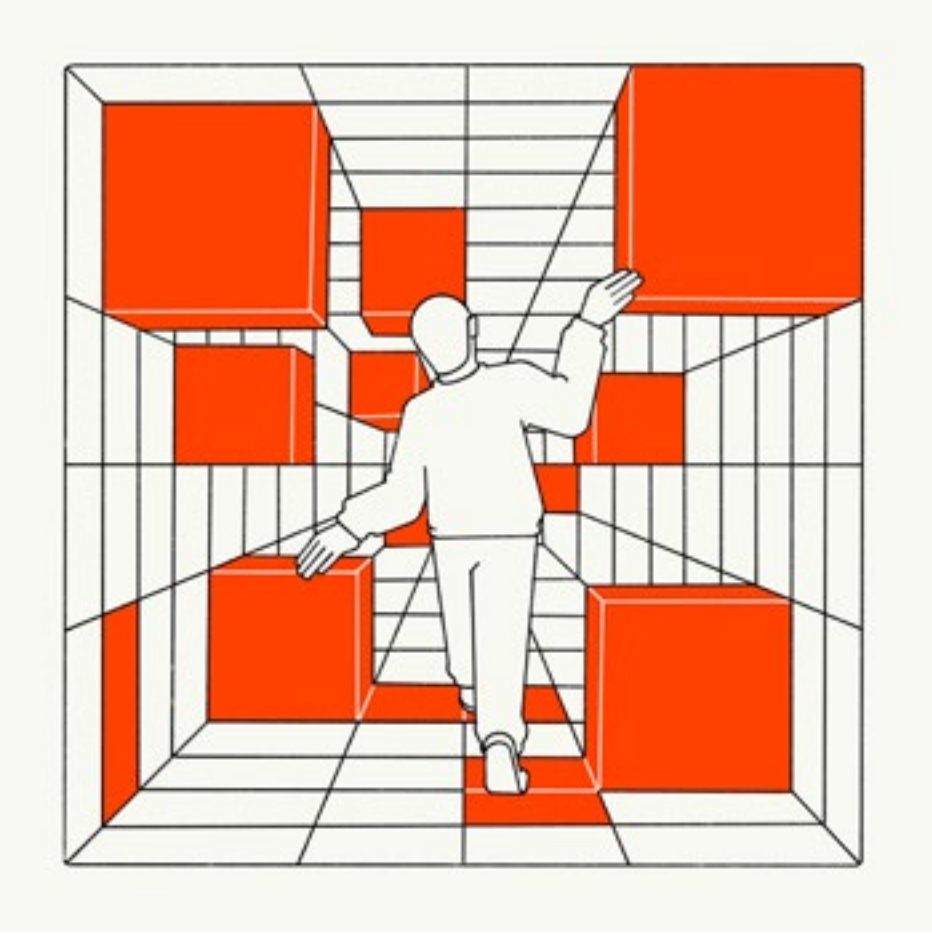


**Table 1. Merging Modality Models**

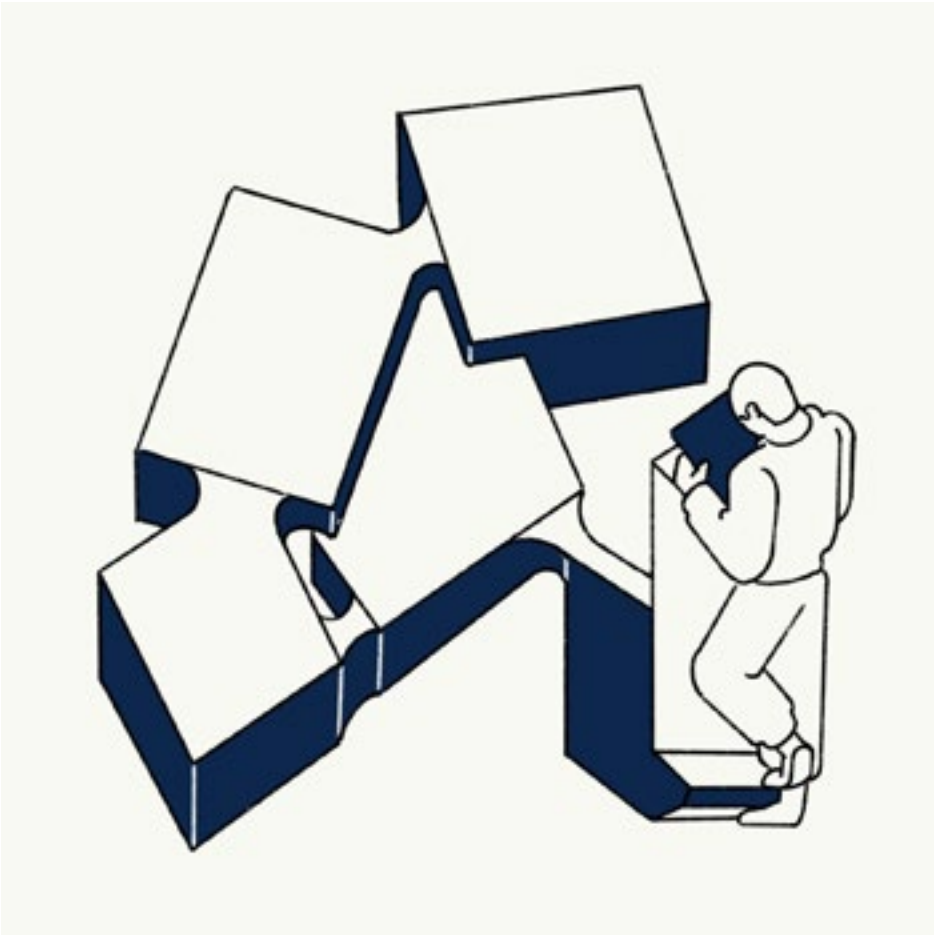
| | f2f | synchronous concurrent | synchronous consecutive | asynchronous consecutive | open access |
|---|---|---|---|---|---|
| **Blended (Hybrid)** | X | | X^ | X^ | |
| **HyFlex** | X* | X* | | X* | |
| **Multi-Access** | X^ | X^ | X^ | X^ | X^ |
| **Blended Synchronous (Synchronous Hybrid)** | X* | X* | | | |

*Note:* Asterisk (*) designates where learners have the option to swap between modes. Caret (^) designates where modality or access options exist for learners and may provide options to swap between modes but are dependent on design.

In 2006, with support from the Canada Foundation for Innovation, I developed *Multi-Access* learning. I introduced the model at the 2009 AACE EdMedia Conference and then expanded on the idea in a 2013 article.[4] Four levels of access are identified: (1) face-to-face, (2) synchronous online, (3) asynchronous online, and (4) open access. While the first three are modalities, the fourth is concerned with open access to course materials and/or discourse. Full choice of modality or inclusion of open access is recognized as not always being possible to implement. For example, one university decided to offer a course with concurrent synchronous online and face-to-face levels of access, with attendance being a requirement and some (limited) asynchronous activities, and with no open access to materials and discourse. Multi-access learning can also embed blended designs, whereby the synchronous instructional hours merging F2F and synchronous online are reduced in favor of asynchronous activities or decentralized synchronous learning "pods," which are small groups of learners who are expected to meet synchronously for discourse, peer assessment, and social support at a mutually agreed upon time each week. The Multi-Access learning framework puts *value* on increasing modality access but recognizes that contextual circumstances often require customizations and limits. The open-access level is added as a different type of access to encourage the involvement of open learners and a reconsideration of locking resources behind a password-protected learning management system or copyrighting materials—not unlike the rationale supporting open-access research.

Multi-Access learning has been recognized as an overarching framework that can broadly incorporate many different configurations of merging modes. How the configurations differ will ultimately depend on the contexts. Thus, HyFlex is a type of Multi-Access, but Multi-Access is not necessarily HyFlex, due to the fact that HyFlex specifies that the learner has the power to choose any modality. More Multi-Access designs have emerged as well, such as Blended Synchronous and Synchronous Hybrid (see below).

*Blended Synchronous* was proposed in 2013 by an Australian team led by Matt Bower (Macquarie University) and including Jacqueline Kenney (Macquarie University), Barney Dalgarno (Charles Sturt University), and Gregor E. Kennedy (University of Melbourne). The team expanded to include Mark J. W. Lee (Charles Sturt University) and published a handbook that included seven case studies spanning web conferencing, desktop videoconferencing, virtual worlds, and more.[5] The team defines Blended Synchronous as "learning and teaching where remote students participate in face-to-face classes by means of rich-media synchronous technologies such as video conferencing, web conferencing, or virtual worlds."



Another term for this same concept, *Synchronous Hybrid*, first emerged in 2014 as *Synchromodal*, conceived by John Bell, Sandra Sawaya, and William Cain (University of Michigan). Defined as classes where "online and face-to-face students interact during shared synchronous sessions," the term was rebranded in 2015 at a conference symposium as Synchronous Hybrid, which has since been used in applied studies.[6] Like Blended Synchronous, Synchronous Hybrid focuses on merging face-to-face and online synchronous learning environments.

One might question how it would be possible to teach synchronously online without asynchronous learning being part of the design; however, asynchronous communication requires more monitoring and digital literacy than synchronous-only classes. It is still not uncommon to have "radio silence" between traditional face-to-face courses with the standard "office hours," so these approaches can sometimes linger with shifts to mixing modalities. There

are significant opportunities available for resource sharing and discourse with asynchronous communication channels, and these typically are a centerpiece in many courses that merge modalities. Those new to teaching online in general may also prefer the synchronous-only design, so as to minimize the workload creep that comes with robust asynchronous communication—especially if they are already committing significant professional learning time to engaging in synchronous online designs. To address this, designs should consider not only mixing modalities but also reducing synchronous instructional hours to create time for asynchronous activities and dialogue. Regardless of institutional or instructor plans for learner communication—whether synchronous or asynchronous—many learners in a course will develop their own private backchannel spaces to support learner-only asynchronous peer-to-peer communication. Instructors may feel they are missing out on some discourse—and that is because they are.

Embedded in the synchronous designs for merging modes is the lesser-known integration of *telepresence robots*. Learners participate within a face-to-face class by connecting via audio and video with a telepresence robot, which can be table-top (stationary with pivot) or mobile. In the latter case, the remote learner can drive the robot around the room or beyond, so long as there is wireless internet (or, in some cases, data networks) for connection.

Lesser-known terms used to describe merging modalities have surfaced as well, although they have not been cited to the same extent in the research literature as the ones presented above. At the time this article was written, those citation numbers were as follows: HyFlex (34), Multi-Access (155), Blended Synchronous (206), Synchronous Hybrid (18), and Synchromodal (48).The lesser-known terms include *Converged Learning* (dating back to 1998), *Mode Neutral, BlendFlex*, *Comodal, Trimodal, Flex-Learning*, and *gxLearning*. Undoubtedly there are more.

***Unfortunately, the shift away from the face-to-face/online binary has presented us with less shared understanding or, at best, muddied waters. Some of the terms created in response to today's emphasis on modality in education are especially complicated.***

## Struggles with Semantics

Semantics is a branch of linguistics and logic with a focus on the meaning of words. It is a critical tool in supporting our ability to communicate a shared understanding of our lived experiences. Like many things today, shifts from old-fashioned binary thinking have resulted in improvements in how we understand each other in society. Unfortunately, the shift away from the face-to-face/online binary has presented us with less shared understanding or, at best, muddied waters. Some of the terms created in response to today's emphasis on modality in education are especially complicated.

*Remote Teaching* or *Emergency Remote Teaching* emerged as a result of COVID-19 due to the concern that hastily prepared practices developed by instructors lacking knowledge and experience in trying to meet learners' needs online would generate negative perceptions of online learning, which has had decades to evolve. The distinction is important to highlight so that criticisms of emergency remote teaching practices—especially from educators who may have low digital literacy levels—are not generalized to online learning as a whole.[7]

*Online Learning* is one of the terms whose meaning has become unclear over time. The semantics have been muddied by technological advancement. In the early days, Online Learning referred to text-based, asynchronous "anytime-anyplace-anywhere" courses. Today, trying to understand the commitments required and/or agency provided in taking an online course is much more complex. Taking a course online may now require time commitments for engaging in synchronous classes—or not. Some classes may operate synchronously with little-to-no asynchronous components, which can often be the case for novice instructors pivoting to remote teaching. Attendance may be a requirement by the instructor, by the program, and/or perhaps even by certifying

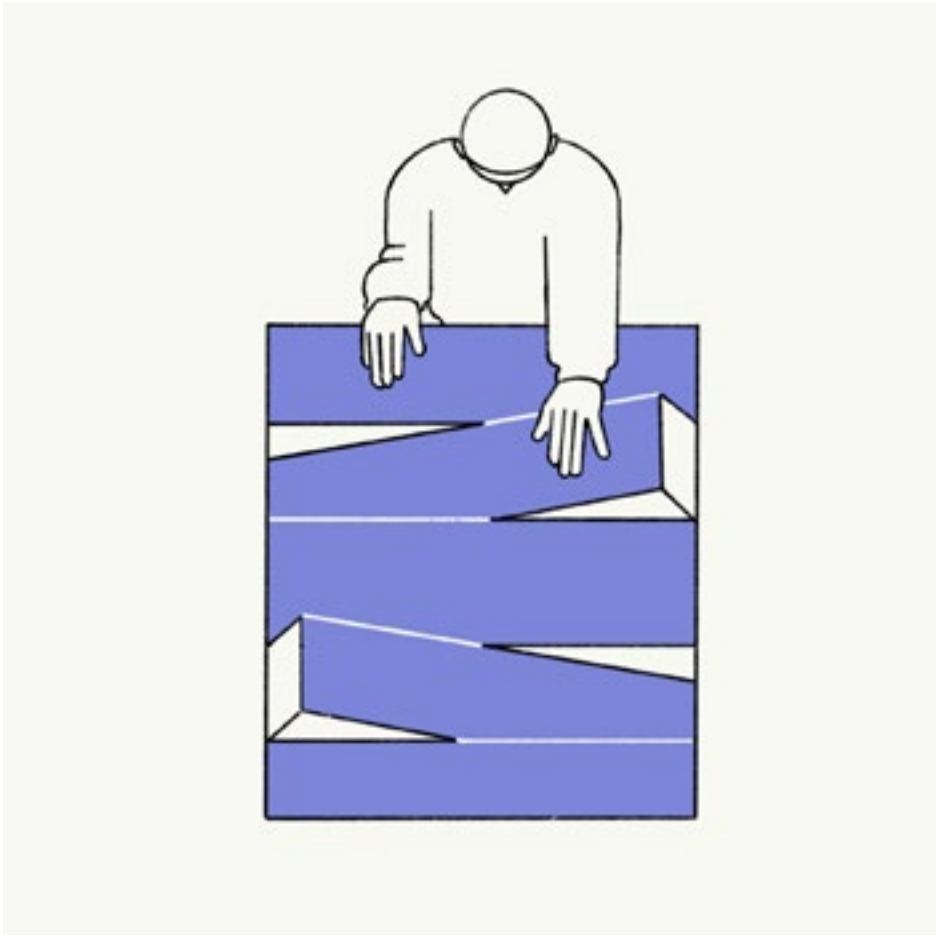
bodies. Higher education institutions offering courses today must do more to communicate course offerings and their modality to potential learners up front and may be required to do so more than once, to ensure comprehension. This also involves more explicit and intentional learning designs to address how to interweave modality, pedagogy, and access in a course or program.

Let's do an exercise: imagine you are about to enroll in a course or program and are exploring the institution's website to determine your commitments. If a program states that it is offered "online," with no further description, what do you expect? Next, what do you expect if you see mentions of "blended learning" or "hybrid learning?" For example, the following passage was posted on the website for a Tier 1 university program to describe what learners can expect in terms of modality: "Program Delivery: The cohort will include face-to-face instruction in courses taught in a centrally-located [city] site and flexible, blended formats that mix on-site and online learning."

Even for those working in modality studies, this description is not clear, so one can assume the target learners will be confused. *Flexible* is a subjective term and can be relative to various contexts. Flexible could mean one has full choice of modality and can move back and forth, much as with HyFlex.For the "blended format," what is the required participation in both the on-site learning and the online learning: concurrent as in blended synchronous? consecutive? What do they mean by "online learning": asynchronous? synchronous? Do learners have full control over mode, or must they pick their mode: on-site? synchronous? online? Must they then commit to that mode due to room size? Are there particular modality participation requirements that are expected of them? If you are new to the scene of online learning and are confused by the terminology, it's not just you.

*Hybrid Learning* has gained amplification currently due to the COVID-19 pivot. Unfortunately, this term is also creating confusion as it has been rebranded, in some cases, for merging modalities. Articles in both professional and popular media are using the term interchangeably to apply to both *consecutive* and *concurrent* modality mixing. If the historical interpretations of Hybrid Learning have focused on consecutive modality mixing (requiring learner participation in both face-to-face and online components), and the new emerging uses imply concurrent modality mixing (merging both on-campus and online learners synchronously), thus widening the meaning of Hybrid Learning, this can be very problematic for a common understanding. Since this sends us back to writing paragraph-long passages to describe our course offerings, use of the term Hybrid Learning is discouraged.

All the new terms that have been introduced are attempts by the community (both academic and professional) to filter out and find each other's work in order to advance knowledge and practice with merging modalities. But if all mixes of online learning are considered either blended or hybrid, we risk the progress that results from sharing common terms and understandings. In a recent search in the University of Victoria Library Summons, the terms Hybrid Learning and Blended Learning had more than half a million hits combined. Hybrid Learning alone resulted in almost 400,000. It's fairly obvious that many of the various designs discussed are embedded (or hidden) in these results.



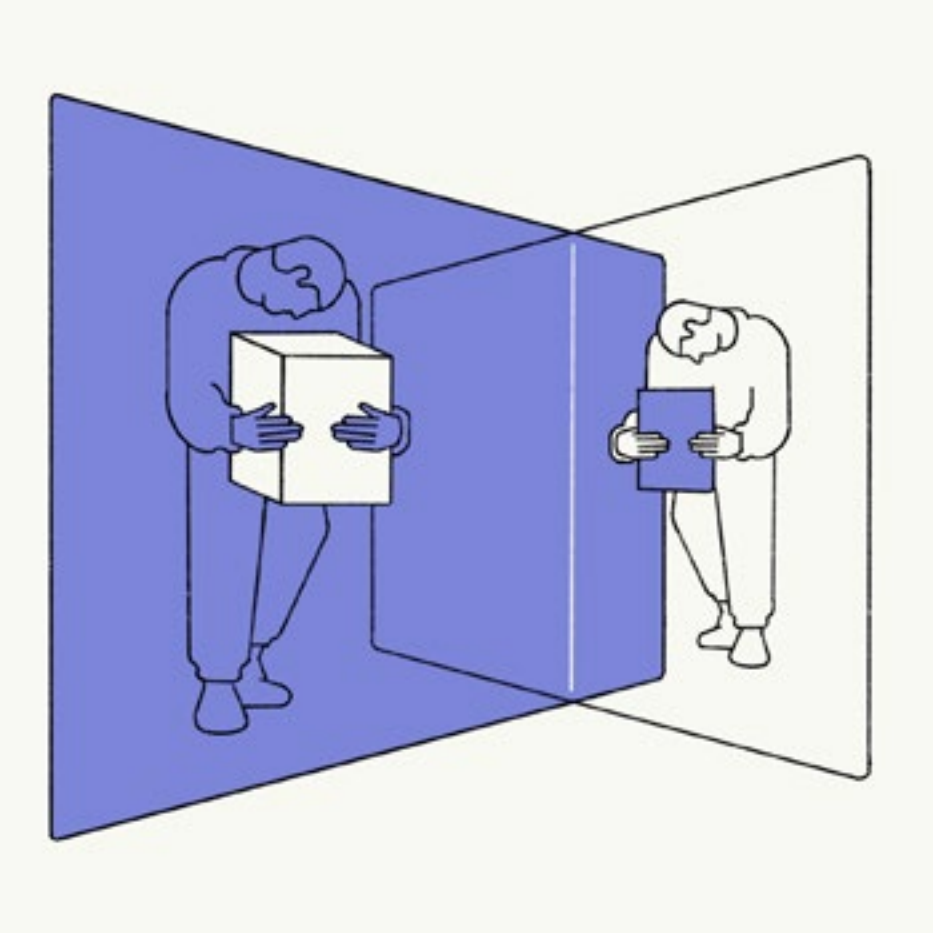
## Pedagogy vs. Modality

One persistent issue around modality in higher education is the bias arising from linkages made between pedagogy and modality, even though these are distinctly separate constructs. For example, online learning is often accused of being passive, and face-to-face learning is described as being dynamic. However, large, lecture-based, on-campus courses can also be passive, and small, online seminar courses can be dynamic and engaging. *Whether a learning experience is passive*

*or dynamic depends on the pedagogy applied in the modality.* Most of the terms reviewed for merging modalities are pedagogy-agnostic, meaning that their definition refers only to the modality applied. Although some integrate both modality and pedagogy, this makes their applicability best in specific contexts. In particular, the following three terms are often linked to modality but are more appropriately understood as pedagogy-related: Flexible Learning, Flipped Learning, and Inquiry-Based Learning.

*Flexible Learning* is a term that is more of a principle or pedagogical practice than a modality. Betty Collis and Jef Moonen describe Flexible Learning as having "many dimensions, only one of which is related to location of participants." They introduce its four components: technology, pedagogy, implementation strategies, and institutional framework. Their definition of Flexible Learning is broad and does not necessarily equate with distance education, but their key idea centers on "learner choice in different aspects of the learning experience," while recognizing that not everything flexible can be scalable.[8] This term and the historical work around it should be understood as merging modalities are explored, since the ultimate design goal of Flexible Learning is to increase flexibility and choice for the learner.

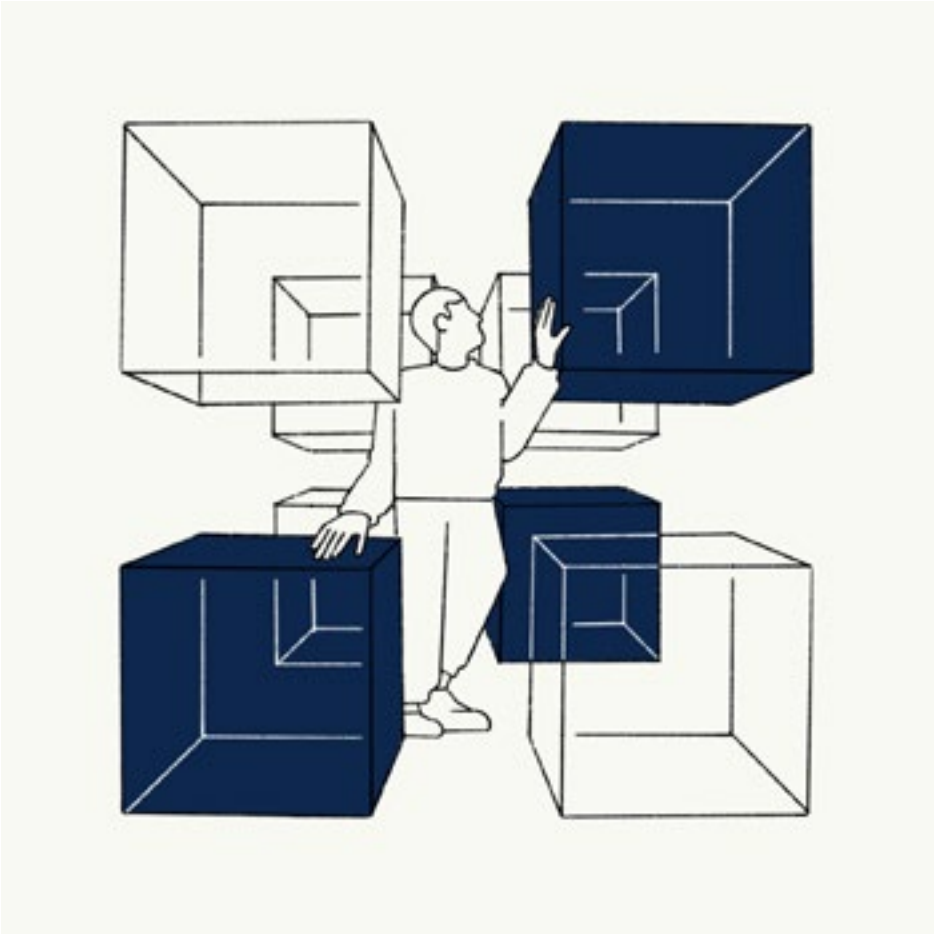
**The concept of Flipped Learning, in which content is learned before class through recordings or other resources, was initially designed with face-to-face courses in mind. But this pedagogical approach can also be applied in online courses, where the asynchronous time is used for reviewing resources and the synchronous time is used for discussion.**



*Flipped Learning* is often considered a modality-related term, since online time outside of class is implicit in its design, but it is more of a pedagogical approach (and one could argue that reading a book chapter before a class in the 1970s is an example of flipped learning). The term *flip* emerged in a conference presentation by J. Wesley Baker in 2000 and was later expanded upon by Jonathan Bergmann and Aaron Sams.[9] The concept of Flipped Learning, in which content is learned before class through recordings or other resources, was initially designed with face-to-face courses in mind. This pedagogical approach can also be applied in online courses, where the asynchronous time is used for reviewing resources and the synchronous time is

used for discussion. Ultimately, this concept is about pedagogy.

*Inquiry-Based Learning* has various interpretations but typically involves increased learner agency. Ultimately, learning happens where the learner is. With the growing recognition of the importance of learner voice and agency, designs ultimately shift to creating time and space for independent activities, as opposed to more structured, controlled, or guided inquiry that may be more directly connected to a classroom. As a result, there is more overlap between learner-centered pedagogies and shifts away from fixed, classroom-centric, face-to-face designs. A learner may not even be "online" per se but may be at home, in the community, in nature, or in some similar type of experiential learning but may be placed in the online category since that is the only option presented as an alternative to face-to-face. Shifts to inquiry-based learning and similar learner-centered designs are making a significant impact in the K-12 sector, but have yet to dominate the postsecondary sector.



## Pedagogy and Open Access

The terminology surrounding open access in education is similarly complex. It was, again, a simpler time when I started teaching online and open-access courses back in 1998. We just "did" open, and it did not have a label back then. Unfortunately, the open landscape is now as murky as the modality landscape. David Wiley states:

> I'm convinced that the terms "open pedagogy" and "open educational practices" are understood so differently by so many people that there is literally no hope of achieving a useful consensus about the meaning of either of these terms. Some definitions are centered on OER [open educational resources]. Some are centered on the public, linkable nature of the "open web." Some are centered on social justice. Some are centered on collaboration. Some are centered on innovation. Some are centered on learner empowerment. Some are exercises in the permutations of these. There have even been arguments made that a clear definition would somehow be antithetical to the ideal of open.

Wanting to find a new phrase that he could fill with his own meaning, Wiley created "OER-enabled pedagogy," which he defined as "the set of teaching and learning practices only possible or practical when you have permission to engage in the 5R activities"—Reuse, Revise, Remix, Redistribute, and Retain.[10]

The problem with "open pedagogy" is that it is portrayed as a rich, constructivist, learner-driven design. This ultimately reveals a positivity bias, since pedagogy is neither passive nor dynamic and remains to be defined by its design. A traditional xMOOC with videos and pop-up quizzes, for example, is didactic and yet open and therefore is problematic to be considered as open pedagogy if the term assumes a dynamic design. Wiley provides a solution for this within the use of his term, OER-enabled pedagogy, whereby the "type" of pedagogy can be listed to aid clarity, such as "OER-enabled constructionist pedagogy."

At the least, for any type of online pedagogy to experience positivity bias is a welcome change, considering that it has suffered negativity bias for so many decades. However, I prefer to avoid bias and favor using "OER-enabled pedagogy" or reclaiming the meaning of open.

## Conclusion

In a time of significant shifts to online learning in a variety of configurations, we should try to utilize common terminology to describe our intended designs and practices. This is an exciting time to re-create how we teach, but in our drive to redefine ourselves, we need to be careful not to overstep in redefining terms that have been cemented in our present and past. We must focus on the meaning of our words in order to create a shared understanding for the future of our academic discourse, our professional practice, and our learners. ■

**Notes**

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