# Improving Engagement by Diverse Learners in Today’s Post ‘Pandemic Pedagogy’ Era

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With a view towards encouraging effective, theory-based praxis amongst contemporary teachers, this Chapter employs a set of five distinct—and, at the same time, neatly complementary—theoretical perspectives to discuss how we might be able to better engage socioeconomically and culturally diverse learners within the blended teaching and learning contexts that have become the new normal in the current post ‘pandemic pedagogy’ era that dawned following the lifting of the global lockdowns and ‘emergency remote teaching’ protocols that were instituted to curb the spread of multiple emergent variants of the SARS-CoV-2 virus. Three of the aforementioned perspectives—Context Analysis, Cognitive Load, and Social Constructivism—are widely familiar and have been influencing our praxis for decades, while the remaining two—Proximal/Distal Factors and Communication Configurations—represent more recent, novel constructs.

## Introduction

While learners can access plentiful online information regarding any topic on their own, skilled and knowledgeable instructors can infuse accountability, structure, and guidance to the online learning process. With a view towards encouraging effective, theory-based praxis amongst contemporary teachers, this Chapter employs a set of five distinct—and, at the same time, neatly, elegantly, and appealingly complementary—theoretical perspectives to discuss how we might be able to better engage socioeconomically and culturally diverse learners within the blended teaching and learning contexts that have become the new normal in today’s post ‘pandemic pedagogy’ era. By this I am referring to the current age that has dawned following the progressive lifting of the various global lockdowns and ‘emergency remote teaching’ protocols that were instituted to curb the spread of multiple emergent variants of the SARS-CoV-2 virus during the initial years of the Covid-19 pandemic.

Three of the aforementioned perspectives—Context Analysis (Tessmer & Richey, 1997), Cognitive Load (Sweller, 1988), and Social Constructivism (Vygotsky, 1978)—are widely familiar and have been influencing our praxis for decades, while the remaining two—Proximal/Distal Factors and Communication Configurations (Molenda & Subramony, 2021)—represent more recent, novel constructs.

## Connection with Applied Ethics

Before commencing a detailed discussion of the perspectives introduced above, it is important, given that the stated focus of this volume is applied ethics, to explicitly establish and describe the connection between what is being discussed within this chapter—i.e., improving engagement by socioeconomically and culturally diverse learners within the technology-mediated teaching and learning contexts characterizing the post Covid-19 era—and the application of ethical principles to our praxis as teachers.

To begin with, the aforementioned connection can be discerned simply by contemplating—as discussed in Subramony (2017)—the Association for Educational Communications and Technology (AECT)’s official 2007 definition of the field of educational technology: “...the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources” (AECT Definition and Terminology Committee, 2007, p. 1, emphasis added). Discussing the intended meaning of the words “ethical” and “appropriate” within the context of said definition, the Committee—comprised of leading scholars including Alan Januszewski and Michael Molenda—went on to explain (2007) that: (a) “ethical” practice necessitates understanding the power position of those designing and developing learning and performance interventions—by considering questions such as who is included, who is empowered, and who has authority during these processes; and (b) “appropriate” interventions are those that are connected with local users and cultures. The Committee also invoked AECT’s Code of Ethics document to underscore that said interventions must avoid content promoting gender, ethnic, racial, or religious stereotypes; emphasize social/cultural diversity; and reflect culturally and intellectually diverse viewpoints. [Incidentally, AECT has since appeared to have removed the word “appropriate” from the subsequent revision—and current iteration—of its definition of the field, although the word “ethical” remains.]

Besides, as Varkey (2021) notes, beneficence, nonmaleficence, autonomy, and justice constitute the four principles of ethics. Transposing these into the context of teaching and learning: (a) beneficence obliges the teacher to act for the benefit of the learner; (b) nonmaleficence obliges the teacher to do no harm to the learner; (c) autonomy obliges the teacher—based on the understanding that all learners possess intrinsic and unconditional worth—to allow each learner to exercise their capacity for self-determination; and (d) justice obliges the teacher to treat all learners in a fair, equitable, and appropriate manner—while also subsuming the concept of distributive justice, referring to the fair, equitable, and appropriate distribution of educational resources among learners. Each of the four ethical principles above oblige the teacher to do everything in their power to better engage the socioeconomically and culturally diverse learners within today’s post Covid-19 blended teaching and learning contexts.

As mentioned in Subramony (2021), Thomas M. Schwen—eminent performance technologist and my doctoral advisor at Indiana University—often used to quip, back in the early 2000s when I was his student, that “We have only recently become proficient enough to do harm.” One of the (many) things he was hinting at with this statement was that we educational technologists as a field had only recently arrived at that fateful juncture in human history where our scholarship and our praxis were starting to impact substantial numbers of stakeholders who had hitherto not experienced the dubious privilege of receiving our attention—including those belonging to historically underrepresented, underserved, and marginalized groups, and those living in parts of the world far removed from the Western socioeconomic and cultural realm. These are the very stakeholders whom this chapter focuses on helping teachers better engage.

Let us now proceed to establish and describe the specific contextual factors pertinent to the current era—namely, pandemic pedagogy, learner engagement, and the problematic pandemic-era digital divide—that will frame our discussion going forward.

## Pandemic Pedagogy

The term ‘pandemic pedagogy’ may possibly have been coined on March 11, 2020, when Roy Schwartzman created a Facebook group with the title of Pandemic Pedagogy for stakeholders to share insights, best/worst practices, advice, successes, challenges, and research about converting to fully remote/online instruction during the SARS-CoV-2 pandemic (see Schwartzman, 2020).

This term—which many of us may have been forced to become intimately acquainted with since March of 2020—has usually been perceived as being synonymous with the ‘emergency’ remote teaching and learning to which educational institutions worldwide had to hurriedly resort following the global spread of multiple variants of the SARS-CoV-2 virus. However, as Bautista (2021) explains, pandemic pedagogy was not simply about the shift in the format of conducting one’s classes. The term conceptually speaking referred to a mindset in which educators adapted to the sudden major upheaval of our temporal and spatial agencies, and practically speaking referred to the problem-solving and troubleshooting mentalities required to simultaneously: (a) (re)design and adapt curricula to new formats and timeframes; (b) implement measures aimed at alleviating feelings of isolation, fatigue and anxiety among learners and educators; and (c) realign performance indicators to measure how technologically-mediated learning platforms are oriented towards achieving teaching continuity and learning inclusion (emphasis added). It is the latter goal on which this Chapter seeks to focus while exploring the issue of engaging socioeconomically and culturally diverse learners within the ‘post’ pandemic pedagogy contexts that have now become virtually ubiquitous across the globe.

## Learner Engagement

Within any teaching/learning context, engagement can be characterized as a two-way process in which: (a) learners are primarily responsible for engaging with—as in, actively interacting with and critically examining—the instructional content; while (b) instructors are responsible for initiating learner engagement—because learner engagement may not happen on its own—and actively engaging learners through effective instructional design (Arghode, Brieger, & Wang, 2018).

Besides, learner engagement is increasingly seen by scholars as a complex  construct encompassing several dimensions of participation in learning activities, because not all engaged learners manifest their engagement in an identical manner (Deng, Benckendorff, & Gannaway, 2019). It involves the learner not only engaging just with the instructional content alone, but also engaging with the instructor/instructional program, and engaging with peers/fellow learners. In fact, Arghode, et al., based on their extensive review of the literature on the topic, enumerate four primary, interrelated, and interactive categories—behavioral, emotional, cognitive, and psychological—of learner engagement that each vary along a continuum:

1. Behavioral engagement involves the learner demonstrating productive classroom behavior by complying with rules and classroom norms;
2. Emotional engagement refers to the learner’s interest/affinity to engage with the content as indicated by their positive body language and attachment to learning;
3. Cognitive engagement describes the learner’s interest in learning not just the expected content but also that which is beyond curricular expectations; while
4. Psychological engagement encompasses the learner’s sense of identification or belonging, and positive relationships with their instructors and peers—this category can alternatively be labeled ‘social’ engagement (see Deng, et al., 2019).

Deng, et al. underscore the importance of improving learner engagement by drawing attention to growing evidence of it playing a pivotal role in successful learning and teaching, with engagement being associated with favorable learning outcomes, and disengagement being linked to adverse effects on academic achievement, including dropout, school failure, and serious behavioral problems.

Meanwhile, Arghode, et al.—referencing ‘learner engagement theory’ (Handelsman, Briggs, Sullivan, & Towler, 2005), which posits that learning is improved through learners’ active involvement with the instructional content both inside and outside the classroom—describe how increased learner engagement improves learning, academic performance, and instructional effectiveness, and characterize it as a way to embrace active and collaborative learning, participation in challenging academic activities, and formative communication with the instructor. They explain how, from the learner’s end, engagement involves (a) actively interacting with and critically examining the instructional content at the cognitive, behavioral,emotional, and psychological levels, (b) devoting more time and effort to focus on learning, (c) being able to transfer their learning to dissimilar situations, and (d) taking effort to improve their learning even outside of class; while from the instructor’s end, engaging instruction (a) capitalizes on learners’ desire and willingness to actively learn, (b) motivates them to be involved in learning by fueling their passion and inclination to study, and (c) effectively uses the learners’ preexisting knowledge and skills to promote engagement.

## Pandemic-Era Digital Divide

Improving engagement by diverse learners within the ‘post’ pandemic pedagogy contexts of the Covid-19 era and after is rendered exponentially more crucial—and, at the same time, exponentially more challenging—by the significant exacerbation of the digital divide since the arrival of the SARS-CoV-2 virus. While the pandemic has speeded up the global transition towards a digital economy by accelerating the uptake of digital solutions, tools, and services, it has simultaneously exposed the wide chasm between the connected and the unconnected (UNCTAD, 2020). The pandemic has increased the digital divide—i.e., the inequitable distribution of access to, competencies with, and use of digital technologies based on factors such as age, geography, geopolitics, socioeconomics, and so on—at both macro (e.g., school system) and micro (i.e., individual learner) levels (Eskiadi, 2020).

## Context Analysis

Ever since Martin Tessmer & Rita Richey introduced the theoretical lens of context analysis in their seminal 1997 Educational Technology Research and Development (ETR&D) article, it has become fundamental to the instructional systems design (ISD) perspective, given how strongly it underscores ISD’s focus on performance gaps in contrast to the content focus of traditional curriculum designers. While ISD practitioners see context analysis as an integral part of the first (Analysis) phase of the generic Analysis-Design-Development-Implementation-Evaluation (ADDIE) ISD process model, this key step is often given less attention than it deserves by us educators when we go about delivering blended instruction, which is problematic because basing our instructional praxis on thorough context analysis can dramatically help improve learner motivation and engagement, especially in blended learning situations. The above-referenced article explicated three distinct types of context—namely, the orienting, instructional, and transfer contexts—that are all vital to take into account when teaching, and even more so when teaching in a blended or all-online format.

As Tessmer & Richey (1997) explained, the orienting context precedes the learning event and contains key factors influencing the learner’s motivation and cognitive preparation with regard to learning, thus determining in part “the cognitive and affective ‘set’ the learner brings” (p. 91) with them. Learners tend to be more positively oriented towards instruction that is congruent with their social, cultural, and moral worldviews. Previous learning or other experiences can also shape a learner’s orienting context—“a teacher or supervisor's comments about an upcoming class can determine the level of motivation a student brings to it even though it may occur days or weeks before the instruction.” (p. 90). To provide a more dramatic example, I was loath to take driving lessons for years due to experiencing, in my late teens, a short-tempered, bigoted individual’s grossly unpleasant and ineffective attempts to teach me how to drive. As a consequence I did not manage to learn driving until I was in my early 30s.

Thus, for better engaging socioeconomically and culturally diverse learners, understanding their orienting contexts is critical to success in this regard. What was these learners’ previous experience receiving instruction in the given subject/topic area? Was it positive, respectful, affirming, empowering, and effective, or was it unpleasant, disrespectful, rejecting/dismissive, marginalizing, and ineffective? From the standpoint of socioculturally cognizant praxis, taking learners’ orienting contexts into account involves can help render our instructional content and delivery more relatable to and better reflective of every learner whose needs we serve; we cannot expect learners to be favorably oriented towards—and thus optimally motivated and engaged by—instruction that they were previously traumatized by, or that they see as being socially, culturally, or morally irrelevant, ignorant/oblivious, insensitive, or downright offensive to their self. Unless we know where our learners are coming from, we will have a difficult time figuring out where/how to meet them, and where/how to proceed from there.

Meanwhile, the instructional context—which the authors note has merited the most consideration from educators in the past—comprises the factors and environments directly involved in instructional delivery, i.e., the immediate physical, social and symbolic resources outside the learner’s person. Effectively fulfilling various learning objectives logically requires various instructional contexts—to give some obvious examples, swim lessons typically require the instructional context of a pool, baking lessons require the presence of baking equipment, and firefighting lessons may well require the presence of fire and fire-retardants. Oftentimes when real-world contexts are too costly/unsafe/impractical, the instructional context uses simulations—e.g. cockpit flight simulators to train pilots, or aircraft cabin mockups to train flight attendants.

The instructional context is where we, as socioculturally cognizant teachers, have the best opportunity to do whatever is within our power to mitigate our society’s preexisting digital divide that—as we discussed earlier on in this chapter—the Covid-19 pandemic so starkly exposed and brutally exacerbated. As K-12 schools and postsecondary institutions across the nation switched literally overnight to emergency remote operations, I encouraged the in-service educators I teach to pay close attention to the issue of student access to instructional contexts that are essential for remote learning to be feasible—which requires us to step out of our own positions of relative privilege and put ourselves in our most marginalized students’ shoes:

What if your instructional context at home was not as conducive to learning as that of your school? Maybe you were lucky enough to be enrolled at a school that had adequate technological infrastructure and an environment conducive to learning; but what if you subsequently had to spend months trying to remote-learn from a home that did not have reliable internet access? What if your home did not provide a quiet, dedicated space where you could attend Zoom lessons and do your homework? What if you had to deal with noisy, disruptive, or abusive family members who made it impossible for you to concentrate on your schoolwork? What if your home was located in a high-crime area, and you woke up one day to find your irreplaceably expensive laptop or tablet stolen? What if you woke up one freezing morning and found the electricity and heat cut off due to your folks being unable to pay their utility bills? What if your home was a car? What if the free or reduced lunches provided at school represented your only opportunity to eat a nutritious meal during the day?

Incidentally, the idea of learners’ performance being influenced by contextual factors—i.e., those outside of the instructional content we transmit and the instructional strategies we employ—is not a new one; rather, it is something human performance technology (HPT) specialists have been talking about for decades—see Molenda & Pershing (2004) for a pioneering, exhaustive discussion of non-instructional factors affecting human performance. As I frequently reminded my in-service teachers, a new iPad would not be of much help if the learner was cold, hot, or hungry, if their chair was uncomfortable, if they had no safe and quiet place to study, and if they were constantly faced with threats to their physical and emotional health and safety. What could help learners stuck during the pandemic in unfortunate instructional contexts outside of physical school campuses perform better at remote learning? Was the answer more textbooks, more Zoom lessons, more learning apps, more testing? Was it easier access to broadband internet and personal computing devices? Was it safety, privacy, nutritious food, emotional support, and role models? Given that resources were generally limited, what sort of performance interventions could give us the most bang for the buck?

Finally, by transfer context Tessmer & Richey refer to the environment in which the learning will be applied following the instructional experience—the ‘payoff’ context for which the learning is ultimately justified. For instance, if a group of learners is fulfilling a curricular ‘requirement’ by is taking a course in, say, French or German, but they have no plans in the foreseeable future to interact with native speakers of those languages, or to read works or to watch films in those languages, then they might have precious little incentive—barring an innate love to learn a language for the sake of learning a language—to put much effort into retaining whatever they learn in said course. On the other hand, if an optional self-defense class is offered to residents of a neighborhood plagued by violent crime, whoever signs up for it is likely to pay close attention because they understand they might need to put their learning to use literally as soon as they step out the classroom door.

As I illustrated several years ago—see Subramony (2006) and Subramony (2009)—learners are not motivated by and will not be inspired to engage with content/information that they don’t see as being relevant to their respective sociocultural environments/milieux, or those they see as potentially distancing them from their people and culture; on the contrary, such content sadly risks alienating them from the empowering, emancipatory potential of education. In the aforementioned articles I detailed how instruction delivered within the extremely expensive, technology-rich learning environments provided by institutions within the North Slope Borough School District in the far north of Alaska failed to motivate and engage native Iñupiat learners since they did not see the state’s mainstream K-12 curriculum as being transferable to their local environment; rather, getting qualified and pursuing careers in, say, STEM fields, would most likely require leaving—probably on a long term, if not permanent, basis—their native communities within the Alaskan Arctic and relocating to more ‘mainstream’ parts of the country. While this may seem like a rather extreme example, similar dynamics have long been seen playing out worldwide, across historically underrepresented and marginalized learner groups—see Willis (1977) for a pioneering account of this phenomenon amongst working-class youth within the economically depressed Rust Belt of northern England.

## Cognitive Load

Cognitive load is a valuable theoretical lens developed out of a study of problem solving by John Sweller (see Sweller, 1988) that can help us better figure out how to better engage socioeconomically and culturally diverse learners within blended learning situations. As Sweller (2020) explains, cognitive load theory sees the major aim of instruction as facilitating the transfer of information from (a) the external environment into working memory and (b) subsequently from working memory into long-term memory; and once the information is stored in long-term memory, it can be (c) transferred back to working memory to govern appropriate action as needed.

 Sweller also usefully differentiates between intrinsic and extraneous cognitive load—a distinction that is absolutely imperative for us teachers to understand as we go about facilitating instruction within blended learning environments. Intrinsic cognitive load “is determined by the intrinsic properties of the information being processed (and) can be altered only by either changing the subject matter … or by changing the (learner’s) knowledge base.” (2020, p. 9) For instance, the intrinsic cognitive load involved in learning integral/differential calculus is higher than that involved in learning algebra, which, in turn, is higher than that involved in learning arithmetic—hence the rationale for changing the learner’s knowledge base in anticipation by means of prerequisites, e.g. learning arithmetic as a prerequisite to learning algebra, and the latter in turn as a prerequisite to learning calculus.

Meanwhile, extraneous cognitive load “is determined by instructional procedures,” (2020, p. 9), some of which unnecessarily increase extraneous cognitive load. One of the most crucial points Sweller makes is that “the vast majority (emphasis added) of the cognitive load effects are due to changes in extraneous cognitive load.” (2020, p. 9) For example, as a foreign-born professor at a US university, I am keenly aware that my unfamiliar accent in English might add to my American students’ extraneous cognitive load. To reduce this, I make sure to enunciate slowly and clearly, I try to catch the more ‘troublesome’ aspects of my pronunciation before the words come out of my mouth, and I repeatedly remind my students to let me know the moment they don’t understand something that I am saying, so I can fix it then and there.

Besides, Sweller discusses the related concept of germane cognitive load (see Sweller, 2010), which refers to the working memory resources devoted by learners to deal with the intrinsic cognitive load associated with a given piece of information. In optimal learning situations where intrinsic cognitive load is high and extraneous low, germane cognitive load—and thus learning—will be high because the learner is able to devote the majority of their working memory resources to deal with the essential instructional content; conversely, in suboptimal learning situations where extraneous cognitive load is higher, germane cognitive load—and thus learning—will be lower because the learner is forced to use their working memory resources to deal with the extraneous elements imposed by the instructional procedure rather than the instructional content. In my example above, if my unfamiliar accent is too challenging for my American students, they will be forced to use more of their working memory resources to make sense of how I speak, leaving them with fewer resources to make sense of what I am saying—which would definitely be a suboptimal learning situation.

When it comes to better addressing the needs of socioeconomically and culturally diverse learners within the blended learning situations characterizing today’s post pandemic pedagogy era, taking the different types of cognitive load into consideration is vital. Given that blended/online learning is clearly here to stay—at all educational levels—it is important that learners continue to be able to devote as much of their working memory resources to deal with the instructional content as they were during traditional, pre-pandemic face-to-face learning; i.e., going forward, our blended learning environments also need to create those optimal learning conditions where intrinsic cognitive load is high, extraneous low, and thus germane cognitive load is high.

Harking back to our discussion in the preceding section regarding learners who were stuck in unfortunate instructional contexts outside of physical school campuses during the emergency remote learning phase at the height of the Covid-19 pandemic, it should not be difficult to envision the quantum of extraneous cognitive load these learners could have been burdened with during that ordeal. Imagine how much germane cognitive load—the working memory resources devoted by learners to deal with the intrinsic cognitive load associated with given instructional content—could have shrunk as a result of having to deal with any or all of the following drains on one’s mental and emotional resources: (a) A slow, weak, unreliable internet connection; (b) Inadequate screen size of the web-enabled device one had access to; (c) A cramped, uncomfortable, badly lit, inadequately heated/cooled study space; (d) A noisy, distracting/disruptive, or downright hazardous physical environment; (e) Lack of access to basic human needs such as housing, adequate nutritious food, or electricity?

## Social Constructivism

Social constructivism is another widely known theoretical lens that is very helpful in guiding us teachers as we seek to better engage socioeconomically and culturally diverse learners within blended learning situations. It derives from celebrated Soviet psychologist Lev Vygotsky’s idea (see Vygotsky, 1978) of cognitive development as a socially mediated process during which humans acquire cultural values, ideological beliefs, and practical problem-solving strategies via collaborative dialogues with more knowledgeable and experienced members of society. Vygotsky highlighted the fundamental role of social interaction in the development of human cognition, stressing the central role played by community in the individual process of meaning-making.

From a practical standpoint, social constructivism sees interaction, collaboration and group work as being crucial to enabling effective learning; social constructivist teaching methods can consequently be grouped into two overarching categories, i.e., discussion and group work (Akpan, Igwe, Mpamah, & Okoro, 2020). The authors emphasize the teacher’s role in guiding interaction during discussion, and highlight the method’s role in (a) helping learners evaluate diverse opinions by developing tolerance and respect for views that are incompatible with their own worldviews; and (b) promoting democratic thinking among learners as they freely share ideas and challenge each other to (hopefully) arrive at a mutually agreeable consensus. Meanwhile, engaging in group work capitalizes on the power of social constructivist learning to help learners acquire skills they can recognize as being critical for success in the 21st century.

As I have detailed in Subramony (2004) and multiple subsequent works, pre-existing factors such as inequitable access to resources and services, sociocultural and linguistic barriers, and lack of role models have tended to alienate historically underrepresented and marginalized learner groups from the empowering, emancipatory potential of education and technology. When we add inappropriate and/or insensitive instructional interventions to this already sub-optimal context, it only serves to alienate these already vulnerable and disadvantaged learners even further, setting off a vicious cycle of alienation and disempowerment in motion.

Learners from non-Western backgrounds often find the fiercely individualistic, hyper-competitive, winner-takes-all ethos inherent in Western educational systems culturally incompatible with their own values. When implemented in an intentional, culturally cognizant manner—i.e., with proper scaffolding and guidance, and a mature grasp of the myriad pitfalls related to group dynamics, power differentials, and, in blended learning environments, the logistics—social constructivist approaches including discussion and group work can help us engage these learners by (Akpan, et al., 2020):

(a) discouraging emotionally unhealthy levels of competition while encouraging healthy collaboration and safe sharing of all learners’ lived experiences;

(b) Ensuring that all learners feel secure enough to freely ask and answer questions, interact and contribute to the classroom discourse;

(c) Helping all learners become co-custodians of knowledge as they share and build on their previous experiences to create new knowledge;

(d) Encouraging all learners to appreciate and investigate new ideas from peers; and

(e) Promoting self-esteem among all learners based on a trust-in-self approach to learning where learners are guided to believe in their capacity to perform well.

## Proximal/Distal Factors

This is a relatively novel construct introduced to the ISD literature by Molenda & Subramony (2021), symbolized by a detailed chart—titled the Molenda-Subramony Framework of the Forces Affecting Instructed Learning, henceforth referred to simply as “the Framework”—summarizing the veritable universe of proximal and distal forces/factors/variables which directly or indirectly influence, to varying degrees, what the authors conceptualize as instructed learning—as in, learning that is the outcome of formal, intentional instruction, as opposed to experiential, incidental, accidental, or any other potential forms of learning. While I am unable to reproduce the actual chart itself herein—readers can locate it on p. 32 of Molenda & Subramony (2021)—due to obvious copyright restrictions, I would like to succinctly explain, in this section, how its postulates apply to our discussion at hand—which they do to a considerable extent.

The Framework makes a distinction between a set of proximal factors directly affecting instructed learning, and three—progressively distal—sets of factors that affect instructed learning indirectly. Proximal factors include: (pa) the learner’s aptitude, intelligence, prior achievement, and pre-existing subject knowledge; (pb) the actual effort put in by the learner to learn; and (pc) the instructional methods and resources used. Meanwhile, first-level distal factors include: (d1a) the learner’s psychological traits, viz., self-efficacy, locus of control, maturational level, and personal interests; (d1b) the learner’s psychological state, viz., expectancies, valuations, situational interest, and motivation to learn; and (d1c) the self-efficacy, expectancies, valuations, interest arousal, and pedagogical choices of the instructor/facilitator. Proximal and first-level distal factors both primarily operate within the learner’s classroom environment—whether said classroom be a brick-and-mortar, blended, or virtual entity.

Second-level distal factors indirectly affecting instructed learning include: (d2a) home/family influences, viz., home environment and parental/caregiver education; and (d2b) peer influences, viz., cliques, and peer behavior modeling. The former influences primarily operate within the learner’s sociocultural environment, while the latter operate within both sociocultural and school environments—keeping in mind that the classroom environment is a subset of the school environment, which, in turn, is a subset of the sociocultural environment; the three are akin to Ukrainian nesting dolls. Finally, third-level distal factors include the influences of: (d3a) mass media; and (d3b) social media. These operate primarily within the learner’s sociocultural environment. The Framework also acknowledges the role of the larger ‘frame’ factors—viz., time, and physical/virtual surroundings—that circumscribe the instructed learning process and act as affordances or constraints on all of the aforementioned proximal/distal factors.

It should not be difficult to see how an understanding of the proximal and distal factors that directly or indirectly influence instructed learning could provide us with powerful guidance as we seek to better engage socioeconomically and culturally diverse learners within blended learning situations. To put it briefly, it boils down to what we can control, influence, or be cognizant of, as we go about serving the needs of all learners. Clearly, as teachers we can do our best to control: (a) the instructional methods and resources used; and (b) our self-efficacy, expectancies, valuations, interest arousal, and pedagogical choices. Meanwhile, factors we may not be able to directly control but definitely can attempt to indirectly influence include: (a) the effort put in by the learner to learn; (b) the learner’s expectancies, valuations, situational interest, and motivation to learn; and (c) peer influences—those which manifest within the classroom environment that we directly control. Finally, all of the remaining factors may be well beyond our direct control or even indirect influence—we can certainly try!—but at the very least we can intentionally be cognizant of and monitor for potential negative impacts on the learners entrusted to our care and tutelage—especially those vulnerable individuals hailing from historically underrepresented and marginalized groups.

## Communication Configurations

The fifth, and last, theoretical lens we shall discuss in this chapter—in terms of its potential to help us better engage socioeconomically and culturally diverse learners within blended learning situations—is communication configurations, which represent yet another novel construct introduced to the ISD literature by Molenda & Subramony (2021). Frequently confounded with instructional ‘methods’ or learning ‘strategies’ throughout the field’s history—Smaldino, Lowther, & Mims (2019, pp. 66-74) serves as an influential recent exemplar—the seven fundamental communication configurations presented by Molenda & Subramony (2021) represent seven distinct, non-overlapping, mutually exclusive arrangements of what the authors deem as constituting the five basic elements—learner, teacher/instructor/facilitator, resources, setting, and communication pattern—that visibly feature within a given instructional event, i.e., the time and place at which instructed learning occurs.

These seven configurations include:

(a) Presentation—A teacher or instructional resource conveys information one-way to multiple learners, while controlling the flow of communication;

(b) Demonstration—A teacher/resource displays and explains a process, procedure, or task to multiple learners, while controlling the flow of communication;

(c1) Discussion: Whole-Class—A teacher engages the whole class in a conversation in which learners share information/opinions, with the teacher remaining at the center, setting the agenda and controlling the flow of communication;

(c2) Discussion: Small-Group—Two or more learners share information/opinions without a teacher’s inputs; the teacher may set the agenda and control logistics, but learners control the flow of communication within their group(s);

(d) Tutorial—A teacher/device interacts, intensively and substantively, one-to-one with a learner, with the pair sharing control of two-way communication;

(e) Repetition—A learner repeatedly performs a skill to improve retention/proficiency;

(f) Study—A learner interacts with instructional/real-world/inner resources, without direct teacher supervision, but often inspired/guided by the teacher; the learner is in control of events, deciding exactly what to do and when to do it; and

(g) Expression—A learner creates a tangible artifact to process new knowledge or attitude(s); a teacher may structure/monitor the experience, but the learner controls what is created and how it is created.

These configurations can—alone or in combination—spawn diverse instructional methods, each of which stands to open up unique opportunities for engaging learners in inclusive, empowering ways. Presentations and demonstrations can be rendered learner-centric—following a constructivist approach—by having them be led by individual learners or—reflecting a social constructivist ethos—by cooperative teams of learners, after the latter have studied the relevant content resources. This can subsequently be supplemented with whole-class and/or small-group discussions to capitalize on learners’ collective intelligence and further the creation of a true learning community. Expression—which results in learners creating tangible products or artifacts—following a period of study allows for constructivist methods such as inquiry learning and problem-based learning that can, once again, be accomplished by learners either individually or in teams. It should be clear by now that the range of possibilities is immense; and furthermore, the creative, inventive, and innovative integration of technology by teachers can permit the adaptation and optimization of these methods for implementation within blended learning environments, so long as simultaneous efforts are taken to reduce the persistent digital divide within our society that currently makes blended learning an inequitably uneven playing field.

## Complementariness of the Aforementioned Perspectives

To begin, let me express suitable regret for employing such an ungainly—albeit grammatically correct—noun in the above section heading. That said, the purpose of this section is to draw attention to something the reader must clearly have noticed already; I am referring to the manner in which the five theoretical perspectives discussed within this chapter neatly, elegantly, and appealingly complement each other, when it comes to helping us teachers better figure out how to better engage socioeconomically and culturally diverse learners within blended learning situations.

For instance, the connection between the instructional context and extraneous cognitive load is undeniable—the latter by definition being generated within the former—and thus paying appropriate attention to the instructional context of a learning event gives us a chance to reduce the extraneous cognitive burden—much of which can be directly caused by socioculturally incognizant, insensitive, or blatantly offensive instructional content/methods—on the learner. Communication configurations—and various inclusive, empowering, social constructivist instructional methods and learning strategies that can potentially derive from them—operate within the instructional context as well; meanwhile, in order to enable effective teaching and meaningful learning said methods and strategies undeniably need to take the orienting contexts of target learners and transfer contexts of instructional interventions appropriately into account. Furthermore, the pedagogical choices made by the teacher that results in instruction being socioculturally cognizant, sensitive, and appropriate—or not—form part of the first-level distal factors detailed in the (Molenda-Subramony) Framework; besides, all the proximal and distal factors covered by the Framework with the exception of factors pc and d1c directly contribute to the learner’s orienting context.

It is easily possible to discern numerous further connections between the five theoretical perspectives discussed in this chapter, and I encourage the reader to engage (pun intended) in such an exercise. Unearthing these connections allows us teachers to develop a holistic understanding of the myriad factors and considerations related to optimally engaging socioeconomically and culturally diverse learners within blended learning situations. To underscore this point I would like to draw from my Indian cultural roots and invoke the old fable of the Six Blind Men and the Elephant; after each of the six men restrictively focused on a separate part of said creature and consequently arrived at wildly (pun unintended) erroneous understandings—a snake, a pillar, a fan, a rope, a wall, a spear—they realized it made more sense to combine their six perspectives and thus generate a far more accurate interpretation of reality.

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