



Why Do Our Theories Matter?

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Abstract

All too often in our practice of distance education we overlook the history of the field and our theories as we embrace new technologies or, as in the past year, when we are forced to adapt to a regional or global crisis that necessitates a temporary move to a remote learning scenario. When we set our theories aside, this approach can lead us to recreate the wheel in our pedagogical approaches, and ignores the unique pedagogy of distance education and the unique characteristics of learners studying at a distance.

This article looks at why our distance education theories continue to be critically important for us to constantly return to and reflect on. Our theories help us to keep focused on the learner, learner characteristics, and the individualised nature of learning, while we undertake design and development work in partnership with faculty and other members of the design team. Our distance education theories remind us to ask the hard questions about what we are trying to accomplish and to what end for the learner, and through which design strategies.

Keywords: transactional distance; community of inquiry; dialogue; social presence; autonomy; adult learner; design

Introduction

Recently a colleague asked about the importance of considering distance education theories in our designs. To me, after witnessing the rapid move to remote learning during the pandemic, when best practices and theories were mostly set aside, this was a great question. Unfortunately, the rapid move to online remote learning led to many recreating the wheel and discovering for themselves aspects of online and distance education that have been discussed and researched in the literature over several decades.

So why do our theories matter to how we approach our designs and how we think about pedagogical approaches for distance education? The simple answer is that they keep us focused on the learner, learner characteristics, and the individualised nature of learning. Thus, examining and continually re-examining our theories can help us understand how they assist our designs, instruction, and overall distance education operations. Further, as discussed by Anderson, “Much of our understanding of how and why learning happens and the best ways to design effective learning activities is enhanced when we work from theoretical models” (2016, p. 47).

Theories of distance education

Our distance education (DE) theories are neither learning theories in the sense of how we think about motivation theory or cognitive learning theory; nor design models like ADDIE, Dick and Carey’s model, or Gagne’s nine events of instruction. They tend to fall between these models because they help us think beyond learning theories and design models. They get us to focus on

how our learners—given their characteristics as adult learners—might individually approach learning, and thus how it will affect our course designs.

Theory of transactional distance

Our field encompasses a unique pedagogy due to the constant (or almost constant) separation of the learner from the instructor and the learning institution. Therefore, our mission or goal was never to replicate the classroom learning experience, but to address the needs of the individual learner. Moore's (1993) theory of transactional distance (TD), which was developed over several years of observations of DE learning environments, exemplifies this goal. Moore's theory of TD has three underlying variables (dialogue, structure, and autonomy) that work within a system to determine the TD that each learner feels at a given moment or time during a course. In essence it is an educational transaction conducted through dialogue between two or more individuals, or as a guided didactic conversation with the text as discussed by Holmberg (1983). The transaction is supported and constantly affected by structure and learner characteristics, and is unique for each learner. Thus, TD and the other three variables are dynamic and change for each learner from lesson to lesson, and course to course. TD is both a geographical distance and a psychological distance and, as discussed by Moore (1993) and demonstrated in work by Saba and Shearer (1994), as dialogue increases, structure and TD decrease within the dynamic system. However, the distance experienced by each learner is affected by the autonomous characteristics of the learner and the learning style of the instructor. Therefore, we can think of each of these variables as being on a continuum. How we, as designers, implement these variables in our designs will affect the TD experienced by each learner.

While numerous researchers have written about TD over the years, many of these studies have focused on the overall notion of TD in the psychological dimension, while excluding the systems nature of the theory and how the variables interact to contribute to TD. Thus, it is important to look at each variable and examine how they affect our designs and how they might affect learning.

Dialogue

Dialogue is probably the most discussed variable of the theory and some, such as Gorsky and Caspi (2005), would argue it is the most important. But what do we mean by dialogue in our designs? As defined by Moore (1993), Burbules (1993), and Shearer (2010), dialogue is a unique subset of our overall educational conversation. It is that element of our educational conversation that leads to the creation of knowledge for the individual and group. It occurs in an open and trusted space, where dissenting opinions are welcome and openly debated. It is also a form of internal dialogue that leads to reflection, as discussed by Rose (2013). However, as Rose highlights, we need to allow time and space for reflection to occur, and that might not always fit well with our curriculum designs—where breadth is often valued over depth. Further, in our courses we know that not all course curricula require a high degree of dialogue—they might be factual in nature, or they could be foundational courses that require more direct instruction.

So, as we think about our designs and the outcomes of a course, what do we want the students to achieve? Do we expect them to delve deeply into topics? If so, we must provide time and space for critical thought and reflection. For, as discussed by Rose, reflection requires a “personal and social commitment . . . as a form of thought that takes place within solitude and slowness” (2013, p. 7). Thus, if we want our learners to engage in deep thought or deep learning, this will dictate our design in terms of the pace and sequence of material covered. If we cannot allow time for in-depth dialogue it probably will not occur, and we need to adjust the desired outcomes. If, however, we want a rich dialogic approach in our course, we will need to limit the breadth of material to allow more time to explore each topic through debate, reflection, and elaboration through dialogue. This notion of sequence and pace leads us to the second variable—structure.

Structure

Structure is a multidimensional construct, as discussed by Shearer and Park (2019). It can be viewed as how the course is structured in terms of pace and sequence of learning, as the technological structure in terms of navigation, or—maybe the most critical view as discussed by Moore (1993)—structure is how the course can adapt to the individual needs of each learner. This idea of adaptability to individual learners aligns with a recent study by Shearer et al. (2020), in which the authors explored what learners are looking for in an educational experience. The study set aside technology and examined the personal dimension of learning, highlighting that learners wanted the courses to be more adaptable to their interests on a personal level, while maintaining a highly social component that allows for dynamic communities of inquiry. This adaptability ties into our notion of adaptive learning approaches that are more personalised; however, it also indicates that we need to be able to integrate an ability for the formation of dynamic learning communities within courses, to facilitate the social construction of knowledge around key areas of interest the students want to pursue.

So how will structure affect the design of our distance education courses? This will depend on how we think about the integration of dialogue. If we want a highly dialogic experience, then structure needs to be low. In other words, the pace and sequence will not be as rigid as in a preproduced course, and it may allow for more adaptability to individual learners. Flexibility and adaptability in our courses are a challenge for designers and instructors. Providing experiences for each learner or small group of learners takes more time during course delivery because we need to monitor and interact within multiple learning paths for a variety of learning activities and learning assignments. Thus, for a highly dialogic course with low structure, the design needs to focus on depth—not breadth—in terms of the time required by the faculty to be responsive to each learner. It also requires a more adaptive learning model where individual learning outcomes are negotiated at the beginning of the course. Not all learners will want to end at the same point, although the broad learning outcomes need to be maintained. In some ways, this approach harks back to the early days of distance education (print-based, computer-based education—PLATO, CD-ROM), where our delivery vehicles and designs focused on the individual and allowed learners to move through courses at their own pace and (often) sequence, although outcomes were predetermined. However, with the move to online and to a more group-based or cohort model, we have lost this individualised characteristic. Finding a way back to this approach will require technologies beyond our current learning management systems (LMSs), which replicate the in-class experience more than our earlier generations of distance education as described by Anderson and Dron (2011).

Autonomy

Autonomy is the element of TD that truly gets to the heart of DE; that is, to the learner. Autonomy makes us focus on learner characteristics, which can affect how we think about dialogue and structure. It does not necessarily help us focus on all learner characteristics—such as access to technology, or technology literacy—but it helps us to think about how each individual might approach their DE course. Autonomy is also a type of wild card when we think about dialogue and structure, because each learner will determine how much dialogue they wish to have throughout the course. Further, some learners will want lower structure to explore topics and others will want to adhere to the predesigned structure. Thus, for some learners, low dialogue does not mean structure will be high. Highly self-directed learners might want low structure but might not require high dialogue except with the instructor or select other students, and on their terms. Thus, as we think about autonomy, we need to consider the concepts of self-regulation, motivation, metacognition, and other attributes that can affect how a learner wants to engage with a course. This ties back to our discussion on structure and how a course does or does not adapt to an individual learner's needs.

Autonomy is a difficult design variable because, in most cases, we do not know who our learners will be when we design a distance education course, or how they will change from semester to semester. So, how do we design for autonomy? As we think about our adult learners, their busy lives, and the variety of career interests they may have, it may be good to think about the types of careers that previous learners have had or wished to pursue when they took the course. This will broaden our thinking about the learning pathways we might want to integrate in a course and learning activities. However, it does not negate the fact that all learners need to accomplish certain early learning objectives. Also, for designers and faculty, there is a balancing act between variety and faculty time. The more variety we have in a course, the more time it takes for both design and development, and for faculty time in terms of teaching and the level of dialogue that is possible.

Community of inquiry

In recognition of the move to online learning in the mid 1990s, Garrison et al. (1999) introduced the community of inquiry (CoI) model to examine how our distance education designs and instruction needed to evolve to include an education learning environment that brings a more immediate form of dialogue and the social construction of knowledge into our distance education courses. Community of inquiry is an important model/theory that was studied in some depth in the early 2000s—notably by scholars such as Picciano (2002), and Swan (2002), and it has continued to be examined by the original authors (Garrison and Anderson, 2003; Garrison, 2017). In the model Garrison et al. (1999) articulate three overlapping presences: cognitive presence, social presence, and teaching presence. At the centre of these overlapping presences, depicted as a Venn diagram in the model, you find the ideal balance. As with the theory of TD, these presences are dynamic and not necessarily set at the beginning of a course. Each learner and group of learners ultimately decides their levels of social presence or cognitive presence in conjunction with, and through, the facilitation and guidance of the instructor through teaching presence.

Social presence

Of the three presences in the model, social presence was a unique addition to our theories and studies of distance education, as it was a concept often overlooked in DE and online courses. In the early days of our move to online learning, as with earlier forms of DE, we focused on content as the key element of the course and relied on the idea of a more guided didactic approach. However, the internet and the move to online learning facilitated by LMSs opened up the possibility of more immediate forms of dialogue and reduced structure. This also shifted our thinking about how students could engage with the course, and how to make them feel less psychologically isolated. Thus, a re-examination of social presence was a much-needed element of DE, and the model helped us to refocus on social presence and to explore its role in distance education.

Short et al. (1976) defined social presence in the past as a very individual feeling of being seen or being there in a space. However, Lombard and Ditton (1997, cited in Ijsselstein et al., 2007, p. 2) expanded on this definition for computer environments and suggested that it is a feeling of “perceptual illusion of non-mediation”. Thus, it is a sense of being a part of the community of learning even when not physically present; it is about the engagement and interactions. Garrison and Akyol (2013) expanded on this idea beyond the sense of being there as an individual in a virtual space, to include how the idea of social presence affected the dialogue or cognitive presence of the group of learners, and brought about group cohesion and collaboration in the construction of knowledge.

Cognitive presence

In the CoI model, within the theme of cognitive presence, was the development of the practical inquiry model (PIM), which showed how learners move between the personal and shared worlds of knowledge, and how educational dialogue progresses from triggering and exploration posts or dialogic exchanges, to integration and resolution. The PIM ties into the literature on deep learning as it relates to cognitive processes and has been fundamental in extending our online discussion classification systems as explored by Henri (1992), Laurillard (1993), Offir et al. (2004), Shearer (2010), and others. PIM is important as it helps us to think about the desired outcomes of our discussion spaces and (as mentioned above in the discussion about dialogue), if we want learners to move to deep learning through critical thinking and reflection. It highlights that we need to allow time and space for learners to move back and forth between the personal space and the shared space of dialogue as knowledge is constructed.

A key finding from many of these studies, and others by Schreck (2011) and Shearer et al. (2015) on educational conversations and dialogue in online courses, is how we do not usually see learners move beyond the exploration stage of the PIM model. There are probably many reasons for this, relating to our designs and the need to cover the breadth of a curriculum instead of being able to design for depth. As many have noted, and has been mentioned by learners, we tend to be stuck in the mechanical nature of post once and reply twice, which does not move learners to integration or resolution of topics. Thus, as we think about cognitive presence, the PIM, and the concept of dialogue, we must also think about what we want as a learning outcome when we integrate discussions into our courses. If they are not well considered, they can be perceived as “busy work” to learners who do not understand why they should engage deeply in the dialogic exchange.

Teaching presence

Teaching presence in the model is key to a successful online course. It is the element of a course where the instructor measures and monitors the ebb and flow of the learning process by each student and the group. Teaching presence goes beyond the organised learning experience and moves between direct instruction (through text) and indirect instruction through dialogic exchanges. It is here that the instructor adapts to the flow of social presence and cognitive presence. They decide when to step back to let a dialogue expand and follow different paths, and when to step in to redirect the dialogic exchange. The instructor also ensures each learner feels they are heard and has a sense of social presence in the group, and the instructor can adapt the flow, pace, and depth of material being explored. Some could argue that this is where the presences come together but, as discussed above and as with transactional distance, the presences are dynamic, and each learner or small group of learners finds their balance throughout the course.

Within this view of teaching presence there is some overlap with the idea of structure in TD. While structure involved how a course could adapt to individual needs, in CoI the instructor is central to this process. They can determine the flexibility that is allowed and available in a reproduced online learning experience.

Effect on design and instruction

As we think about these theories and models, it becomes evident that they are central to our course designs, and to instruction during delivery. They help us to think more deeply about our learning objectives and outcomes, and to ask ourselves why we are including certain content, learning activities, and assessments. For example, if we include a discussion forum in a lesson, what is its purpose? And how long will we allow the dialogue to unfold (1 week, 2 weeks, or longer)? If we want learners to achieve a level of integration, we must allow time and space for

that to occur and facilitate the pauses in dialogue so it remains dialogue as discussed by Neff (1988). Further, does each learner need to follow the same path through a course? Do we, as instructors, have time to allow for different paths and thus a variety of assessment strategies? This focus on dialogue and cognitive presence highlights how we can structure our content, and how open we are to the exploration of content and concepts by the learners, through dialogic paths.

As mentioned above, theories and models keep us focused on the needs of the learners and the unique learning characteristics they bring to each course, whether they are adult learners or more traditionally aged students. The theories and models highlight the systems approach to our designs and the dynamic flow during instruction, as each learner and group of learners finds their own balance, and they remind us that our goal is not to replicate the classroom experience. Distance education has a unique pedagogical approach that focuses on learners who are studying at a distance, and adult learners who have many competing demands on their lives.

How could these theories and models have helped with the move to remote learning?

As we reflect on the past 12+ months we can understand the frustrations of faculty, teachers, and learners who were thrust into remote learning—especially faculty and teachers who, without understanding the theories of the field or having the guidance of a designer, or the time to work with a designer to develop a distance course, were working in uncharted territory. It is also clear that faculty and learners became a bit less dissatisfied in subsequent semesters when faculty had more time to work with designers, tweak their online courses, and better understand the online learning experience. However, news articles still describe a high level of frustration, especially about synchronous delivery methods in which long times in front of screens can lead to burn-out by learners and the faculty. There have also been news articles about the failures of, and dissatisfaction about, the move to online. These are similar to the article by Schaffhauser (2021), in which students complain about their online courses being full of what appears to be “busy work”. These news articles highlight how ignoring the theory and research of the field can lead to disastrous results in online courses, as discussed in a recent article on Contact North (2021).

Thus, if teachers had more time to work with designers who are well versed in DE theories and models, the overall impression of distance education and online delivery methods could have been very different. We can only hope that the rapid move did not damage the general perception of distance education and set us back years in terms of it being a recognised and valid form of learning. It is unfortunate that the quick move also focused primarily on a synchronous delivery method in which video was used in ways that are contrary to years of research. Research has shown that our attention span when viewing video is short (7 minutes or less) (Geri et al., 2017), and marketing research (Wistia, 2011) shows a drop from 85% sustained attention for 30-second videos to 45% for videos of 5–10 minutes. Further, Bradbury highlights that in an in-person classroom lecture there is a “decline in students’ attention 10–15 minutes into the lecture” (2016, p. 1). Thus, it should not be a surprise that long live video sessions using Zoom or other tools were not as successful as hoped, and led to high levels of learner dissatisfaction and fatigue (Schroeder, 2021). Even when instructors insert a range of learning activities to break up the inherent presentation style of video, it is still a very passive medium, and it is easy to mute and point a camera away, or browse the web while on a video call. Again, we see how this one element about media in our designs would have been used very differently if there was time to explore the research, work with knowledgeable designers, and understand the unique pedagogy of distance education.

Equity and opportunity

As we read the news today, we might feel we are on the verge of a new, long overdue awakening, when we regard everyone as equal. We've felt this before—during the 60s and at other times—but this time we hope it is different and that we will move towards an era of acceptance in which our similarities far outweigh our differences. This notion is likely to resonate with those of us in distance education because the drive for equity and opportunity has been a cornerstone of our field. As distance education and adult education leaders, researchers, and practitioners, we have worked for years to bring learning opportunities to the disenfranchised—those who could not avail themselves of traditional avenues for education. As Wedemeyer (1981) wrote, it was a drive to educate those at the back door.

Ours is not a field of technology, although we use technology to achieve our goals. Ours is a field of opening up educational opportunities. Since the early days of rural delivery, correspondence education, computer-based education, and other forms, we have adapted our approaches to reach underserved audiences and provide a quality learning experience that fits with each learners' time and place.

Thus, as we look at the definitions, theories, and practices, we see that DE is a field of study and research that looks at the individual or small communities of inquiry that engage learners where they are, at a pace they are comfortable with, to help them meet their educational goals. The field is grounded in adult education that draws heavily on the principles of independence, self-regulation, intrinsic motivation, and autonomy, but also has a solid student support system to address individual needs. Ours is a systematic approach to learning that focuses on the individual learner.

So, as we look at the past year during the pandemic, it is important that we help others to not confuse the notion of remote learning (which focuses on technology fixes to simulate the classroom), with that of distance education and open-learning opportunities. It is unfortunate that the rapid move to remote learning to address traditional education during the pandemic has been confused with good online learning and what we know as good distance education. We hope we do not have to spend years repositioning the field.

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