

Soul (Slow Online and Ubiquitous Learning): Analysis and Regulation of Instructional Time

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ABSTRACT

This paper addresses an experimental and innovative pedagogy and philosophy: Slow Online and Ubiquitous Learning (SOUL). Since 2011, the co-authors have implemented SOUL as a pedagogy and philosophy into the online courses they teach at a university level. Pedagogically, SOUL is a pragmatic temporal regulation that limits and paces course commitments for students and instructors. Philosophically, SOUL is an intervention into the conventional wisdom that portrays online learning as a limitless exchange of ideas 24/7. This paper provides a theoretical framework that underwrites SOUL, reviews relevant research on time, and analyzes instructors' and students' experiences and self-study data.

Keywords: *Instructional Time, Slow Movement, Online Learning, Ubiquitous Learning, Instructional Design*

The spirit of the time shall teach me speed. —Shakespeare, *King John*, Act iv, Scene 2

Paradoxically, the power and potential of e-learning is also its problem or pitfall— 24/7 access and presence overburden and overwhelm systems of response. The same can be said for global trade, wherein the capitalist must seemingly be present 24/7 for markets opening each morning as the world turns. The sun is always rising, yet this fallacy takes a toll. Machines and the environment overload and overheat as capitalists, consumers, and economies are fatigued, recessed, and depressed. For e-learning, neither consumption nor production is sustainable as students and teachers juggle or struggle with partial attention, just-in-time demands, and a saturation of messages— images, texts, and sounds. Like it or not, each generation (e.g., boomer, X, millennial) is limited by phenomenological, technical, and temporal dimensions of life. Feelings of cyberfatigue and technostress set in as our devices generate deadlines, notifications, prompts, or reminders; servers crash and fail; the analog clock ticks; the sun sets. Neither cyborgs nor posthumans rely on perpetual motion and need to recharge through electrical power grids and eventually update through signal towers. The pace of communication and learning accelerates while information and expectations invariably saturate in an endless cycle that is simultaneously exhilarating, dizzying, and exhausting. To this end and moment, no one has achieved the status of 'fast e-learner.'

Defined and premised on time, online learning “means technology enabled online real time (synchronous) interaction between the instructor and the student, near time (asynchronous) interaction between the instructor and the student, or any combination thereof” (California Legislature, 2008, SB 1437, chap. 718). Yet ironically, time is one of the most neglected variables in research on online learning and teaching. Empirical challenges of research include reliable documentation and records of instructional time and learning time. In self-reporting data, instructors and students may be unprepared or too embarrassed over the volume of time expended and pace clocked to provide accurate accounts. If accounted for at all, some researchers transform a quantitative problem of “how much time is expended?” to a qualitative problem of “what is the variability of time allocated?” or a problem of polychronicity (Bluedorn, 2002; Martins & Nunes, 2015). When the amount of time expended in learning and teaching is addressed, the pace of time is typically neglected.

In this paper, we take the increase in demands or pressures on instructional time and learning time as given (Spector, 2005; Szollos, 2009). First, we provide a theoretical framework for temporal regulation in online courses. Rather than demonstrating how a course or learning management system (CMS, LMS) or virtual learning environment (VLE) can be configured to regulate time, we demonstrate how users can self-regulate. Designers and vendors tend to stress maximizing time in the LMS and some students stress minimizing time. We stress moderating time in the LMS. Second, we summarize self-study and narrative data derived from our experiences (n=3 instructors) with SOUL in an online course (i.e., Foundations of Educational Technology) we designed taught since 2011. We address instructional time *and* learning time throughout but in the data analysis we focus on instructional time. Our intent is analysis first and advocacy second.

We have full autonomy over the substantive dimension, or scope and sequence, of the curriculum or course under analysis. Up until 2011, we neglected the temporal dimension and felt the amount and pace of time were unhealthy and unsustainable. The course is a requirement within a “for-profit” educational technology graduate program within the University of British Columbia (Petrina, 2005). The business model of the program necessarily intensifies the pace and hours of instruction but this is not the only relevant intensifier. How can designers effect a healthy, sustainable amount and pace of time in an online course? How does SOUL regulate the amount and pace of instructional time and learning time? Learning and instruction take time and require pacing but what is healthy or sustainable?

POLITICAL ECONOMY OF ONLINE INSTRUCTIONAL TIME

Among our cultural inheritance’s most heartfelt stories, such as O. Henry’s “The Gift of the Magi,” are those that ask “how much is enough?” or “when is enough, enough?” These are less questions of indulgence than of caution and care. Slow food was established on this premise inasmuch as in response to the increasing speed of life marked by fast food. As the story goes, in 1986 Italian reporter Carlo Petrini led a group in protest of a new McDonald’s franchise at the base of the Spanish Steps in Rome, brandishing “bowls of penne and other home-cooked Italian dishes, determined to demonstrate the social and culinary costs of homogenized eating” (Massoud, 2019). Yes, these are the famous Spanish Steps that Dylan describes in the opening lines of “When I Paint my Masterpiece,” where Rome resembles “the land of Coca-Cola.” In November 1989, the “Slow Food manifesto” was written, beginning with a cause and culprit:

Our century, which began and has developed under the insignia of industrial civilization, first invented the machine and then took it as its life model. We are enslaved by speed and have all succumbed to the same insidious virus: *Fast Life*, which disrupts our habits, pervades the privacy of our homes and forces us to eat Fast Foods. (Portinari, 1989)

Delegates from fifteen countries endorsed the manifesto and nowadays slow food inspires a global movement. As Petrini observed, enough of “McNuggets and Monsanto”— “it’s a union of education, politics, environment and sensual pleasure” (quoted in Davey, 2004).

Slow online and ubiquitous learning (SOUL) was founded under similar conditions and circumstances. Down-shifting to slow or steer the juggernaut to more healthy or organic paces and volumes, e-learning and educational technology (ET) with SOUL adds to the concerns of slow food with the health and well-being of individuals, the collective, and the planet, a concern for learners and teachers. What does it mean to be an e-learner or i-teacher in the 21st century?

Although the beginnings of e-learning and ET date back much further, most histories of online learning and distance education begin with the early days of correspondence education. In

British Columbia (BC), correspondence education dates to 1919 and a small island off the west coast, where a lighthouse keeper requested that the Provincial Department of Education use the postal service to forward curriculum materials to assist his wife in teaching their small children (Buck, 1951; Ruggles et al, 1982, p. 16; Toutant, 2003). In the first chapter of *Digital Diploma Mills*, Noble (2002) outlines the economic motive of this type of correspondence. Philosophies of correspondence education invariably acknowledge alternatives to conventional schooling and alternative demographics served, such as the lighthouse mothers and children. As Singh and Panda (1980) define it, correspondence or distance education is “carried out through mail and the students, at a distance, can learn and be benefitted by well-prepared, planned transcripts of a tutorial” (p. 27).

Theorists quite readily point out the independence of the learner in correspondence or distance education (or online learning), but this type of distance is not merely geographic. As Moore (1983) notes, it is “educational and psychological as well. It is a distance in the *relationship* of the two partners. It is a ‘transactional distance’” (p. 155). This relational sense of distance highlights the etymology of correspondence education— to correspond means to be co-responsive or answerable to each other. At unprecedented paces with volumes of messages it is impossible for participants in e-learning or online education to co-respond or be answerable to each other. Discourse is possible but dialogue less so under fast-paced, communication-saturated conditions.

Intensifiers in online courses include business models that maximize enrollment and minimize instructional costs, omnipresence of media and technology, and increasingly unhealthy patterns of work in the creative industries and higher education. Technological changes mark occupations in the creative industries and higher education, wherein workers routinely report “chronic time pressure” (CTP) or feelings of “*being rushed*” and a “*shortage of time*” (Szollos, 2009, pp. 332-333). In the creative industries and education alike, unsustainable hours and crunch time pressures are often dismissed as love of the project and task or commitment to clients and students (Menzies & Newson, 2007; Samuel & Kanji, 2019; Thompson, Parker, & Cox, 2016). “It’s very important to just bust the myth here that longer hours equals productivity,” Harriss (2019) clarifies. She continues, noting that educators teaching creatives and, for this paper, online instructors, are “making permissible forms of labour exploitation, and creating work-life balance that often triggers mental health” problems (quoted in Block, 2019, p. 1). Summarizing reports of CTP, Wills (1996) concluded that faculty members are “battling to keep going as best as they can, but in the longer term the damaging effects of long working hours upon social activities, family life, health and welfare, may be more difficult to ignore” (p. 296). As one faculty member confessed, “I’m absolutely flat out now and if the treadmill revolves faster, I will be unable to cope” (p. 298). Media and technology erode boundaries between home and work and, making matters worse, online courses move the workplace to the domestic space and cafés provisioned as a “post-geographic office” (Conlin, 2006).

Advocates of flexible time would have us believe that the political economy of time is merely applicable to 19th and 20th century factories and offices. In the 1990s, coinciding with the rise of the CMS for online learning, “smashing the clock” became a common refrain across business and higher education. The unspoken policy for “this post-face-time, location-agnostic way of working is that people are free to work wherever they want, whenever they want, as long as they get their work done” (Conlin, 2006). As 21st C reality goes, most flextime workers clock many more hours through unpaid overtime, driving down their hourly wages, while managers’ salaries and rates of profit skyrocket (Chung & van der Horst, 2018; Lott, 2018). At universities, middle management has bloated, employee paychecks stagnated, and part-time contract faculty populated the labour pool, especially for online education (Petrina & Ross, 2014; Petrina, Mathison, & Ross, 2015). Importantly, online instruction directs attention to Marx’s (1867/1967) conclusion: “what is a

working-day, presents itself as the result of a struggle,” in many ways here a struggle between the instructor and manager’s means of production (i.e., a CMS) (p. 235).

Derber (1983) acknowledges that “professionals do not punch time-clocks” but “they work according to the imposed rhythms of the organization and procedures and technology subject to administrative approval and review” (p. 310). He continues, professionals are proletarianized through a “lack of control over the process of the work itself” or by submission to “a rhythm or pace of work which they have no voice in creating” (p. 313). Who or what controls total hours of work in online courses? Who or what controls pace of work?

To understand learning time and instructional time, we have to dispense with the naïve assertion that “learners determine the time and pace of instruction” (Piccoli, Ahmad, & Ives, 2001, p. 404). This derives from false distinctions between objectivist and constructivist theories of online instruction. Theorists assert that in objectivist courses “the instructor controls the material and the pace of learning” while in constructivist courses “the frequency and intensity of student processing of cognitive input, rather than the instructor’s agenda, drives the pace of the learning process” (Arbaugh & Benbunan-Fich, 2006, pp. 436, 437). In theory, this may be the case but it is readily contradicted by facts of technological production and empirical reports.

REVIEW OF LITERATURE

Control over time at work is essential to health and wellbeing. Yet for all the efforts and discourse effecting “personalized systems of instruction” (PSI)— e.g., “individualized,” “flexible,” “personalized,” “self-directed,” and “self-paced” learning— effects of time on online instructors have been neglected. This article addresses learning time but the focus is on instructional time. While “online instruction includes everything from self-contained courses to varying complements to traditional brick-and-mortar classrooms,” online courses constitute the setting for the research (Kim, 2004, p. 304).

We define instruction as a scope of functions. The *O*NET Dictionary of Occupational Titles* (Farr & Shatkin, 2007, p. 231) identifies a wide scope for communications or online instructors.¹ The implication here is that time required to complete four functions (i.e., #4-#7) has intensified in pace and increased in total hours:

4. Preparing and delivering image, text, and sound media for downloads and mobility
5. Initiating, facilitating, and moderating discussions
6. Responding to student inquiries and questions (i.e., providing access that simulates “office hours” to advise and assist)
7. Evaluating students’ interactions, assignments, and papers

Similarly, online instructors in Rohland-Heinrich’s (2016) study reported this scope as involving but not limited to: “professional, pedagogical, social, evaluator, administrator, technologist, advisor/counselor, and researcher” functions (p. 100). One online instructor reported that “many of the functions remain the same whether I teach online or in the classroom” (p. 100). Another reported that these functions are “complex as it is a challenge to remain engaged and available” (p. 101).

CTP is nonetheless a neglected variable in online educational research and learning analytics. For instance, the *Handbook of Research on Educational Communications and Technology*, in 894 pages, refers to time (hours, pace) only peripherally (Spector, Merrill, van Merriënboer, & Driscoll, 2008). Similarly, the *Handbook of Learning Analytics*, in 355 pages,

overlooks learning and instructional pace and time except for a chapter on time given for the preparation of writing assignments (Lang, Siemens, Wise, & Gašević, 2017).

Tallent-Runnels et al.'s (2006) survey of research in online teaching is an extensive engagement with time but overlooks pace. They make an effective distinction between “engaged time, or time on task,” and total time expended on courses but the focus is on learning time, not instructional time (p. 99). They note that some researchers suggest “that the quality, rather than the quantity, of the time spent in online courses might be a more accurate index of students engagement” (p. 100). Of course, quality is important as an index of engagement. However, Tallent-Runnels et al. make the common mistake of transforming the quantitative problem of time into a qualitative of problem of engagement. Time, especially instructional time, is extremely important, albeit commonly finessed away or overlooked.

Some report that instructional time is excessive in comparison to F2F courses (Song, 2016; Spector, 2005) and others report that time spent is about equal in comparison (van de Vord & Pogue, 2012). In an extensive analysis of instructional challenges, Song (2016) acknowledges the heavier workload as “instructors tend to see online course as time-consuming work” (p. 709). Certainly in the first author's experience and data, instructional time is much greater (i.e., 2x-4x) in quantity and demanding in urgency than in F2F courses. The course under analysis is a 3 credit course (13 weeks), which with long established conventions for F2F courses suggests that learning time ought to be 6-9 hours per week for student preparation (i.e., 9-12 hours/week including class time) (Hassel & Lourey, 2005, p. 9; Roberts, 2001, p. 22). Professorial or instructor preparation time is conventionally 6 hours per week for a 3 credit course (i.e., 9 hours/week total) (Kahn, 1973, pp. 480-481). Online courses are asynchronous and do not pivot around weekly F2F class meetings. Analogy with F2F conventions should nonetheless hold as the workload is reasonable. Instead, online courses can require from instructors 2-4 hours per day on average (i.e., 14-28 hours/week). Demands on time from the LMS are often relentless.

That said, there is little to no research on interventions for regulating time, including LMS or VLE design interventions. Accounting for time means accounting for the LMS, which consistently affects hours and pace. Briefly, a LMS is an application that delivers and manages instructional content, allocates access and assignments, including discussions, identifies and assesses individual progress, and collates data for analysis (Watson & Watson, 2007, p. 28). We are critical of illusions of “the invisible LMS” (Wooler, 2015). Designers theorize technological transparency in two ways. In the first design sense, technology ought to be transparent or invisible to users (Norman, 1998). In a second sense, an open source sense, users ought to “see” what is inside the box and be given means to reconfigure. In this second sense, users are made cognizant of effects of the LMS, including time effects (Waddington, 2010). The fallacy of the first sense, “we should be taking the learning to the learner and not taking the learner to an LMS interface,” assumes low or no LMS effects (Wooler, 2015, p. 17).

In exploring LMS effects, researchers consistently overlook demands on time, especially on instructional time. For instance, in an otherwise helpful review, Coates, James, and Baldwin (2015) fail to mention how the LMS affects instructional time. Some researchers explore time necessary to learn how to use the LMS (Kim, 2017; Song, 2016) and others account for LMS effects on evaluations of Instructors (Lan, Tallent-Runnels, Fryer, Thomas, Cooper, & Wang, 2003; Lonn, Teasley, & Hemphill, 2007; Tallent-Runnels et al., 2006). Lopes (2009) underplays LMS demands on time and instead concludes that, at least for her, “information management is much more difficult these days than time management” (p. 13). She says the LMS “has been helpful in helping me to organise and manage” information (p. 13). However, we have found that LMS's (i.e.,

WebCT, Blackboard, Desire2Learn, Moodle, Canvas) intensify the flow of information and demands on pace and time. Most basically, the LMS's are clunky to use and slow to load. More germane to this research, for example, LMS's register quantity of discussion posts, which is then configured as an indicator of student activity (i.e., the greater the posts, the more active the student).

Granted, the "time-independent" attribute of online learning is an asset yet neither students nor instructors escape the pressures of time. Hence, we reject notions that this era of polychronicity and multitasking decimates concerns with time and instead argue, via SOUL, that these characteristics of work necessitate attention to healthier perspectives on time.

SOUL INTERVENTION

SOUL entails commitments and responsibilities that regulate the pace and volume of consumption and production in online spaces, including LMS's. One mode of moderating messages is what we call a pause, or the virtual pause button. A pause in action within e-learning spaces provides time for catching up, reading ahead, moderating the volume of discussion posts, and planning and designing interactivities. As Applebaum (1995) theorizes, "the stop is the time of awareness" (p. 16). The pause is a "betweenness" (p. 15), acknowledging that time is ordinarily understood as "insufficiency ('Never enough time')" (p. 85).

Upon planning for the 2011 fall term, the coauthors corresponded: "The big change for 511 will be a new philosophy, which is ET with SOLE (Slow Online Learning and Education)... It amounts to slowing down the e-learning juggernaut to a pace manageable for us and the students." Since that point, in two online courses we teach, we have implemented the following regulation (in varying forms):

Pragmatically with SOUL, in courses such as ETEC 531 at UBC, we stop or pause from Canvas for two days each week— Mondays and Tuesdays (Vancouver PST as common time zone) (i.e., 0 posts except private posts for planning). We also expect a conventional weekend pause, although we also anticipate that weekends may be the best times for some of you to contribute. In effect, the pause means a pause in access, including discussion posts (limit to sparse posts only for assignments) for working on the readings and thoughtful engagement with the assignments. For all participants throughout the term a second mode of moderation entails quantitatively fewer posts and qualitatively better posts. This means about one or two messages or posts per week for each student and teacher as co-respondents in conversation. This also means a thoughtful engagement with the readings, modules, assignments, and discussions each week.

As indicated, in online teaching we experience and observe in students a marked increase in instructional time and learning time. We necessarily assume that instructors and students are "time poor," in the way Honoré (2004a, 2004b, 2008, 2013) describes. Individually and collectively, Honoré (2004a) notes, we are "straining to do everything faster— and paying a heavy price for it.... We are driving the planet and ourselves towards burnout. We are so time-poor and time-sick that we neglect our friends, families and partners" (p. 274). The complementary assumption is that slowness helps us play, study, think, and work better. Slowness begs pauses which beg the power of silence (Sardello, 2006). To avoid or counter a charge of "quick fix," SOUL is a pedagogical and philosophical intervention.

Regulation of time on task or time online can be self-imposed (i.e., I'll time myself and spend two hours in the online shell), technologically-controlled (i.e., LMS configuration closes

access to all users Mondays and Tuesdays), or rule-based and consensus-based (i.e., As a rule, we agree that will avoid going online or curb our activity at these times). SOUL is a rule-based and consensus-based intervention in that, as a class or group, we commit to staying out of the course shell or curbing our activity on Mondays and Tuesdays. We also commit at the beginning to slower in pace, fewer in quantity, and higher in quality messages and posts throughout the term.

SELF-STUDY METHODOLOGY AND DATA ANALYSIS

This paper draws on narrative and self-study data and methodologies to ground and explore SOUL in action. Self-study is an “insider” methodology wherein practitioners “critically examine their actions and the context of those actions as a way of developing a more consciously driven mode of professional activity, as contrasted with action based on habit, tradition, or impulse” (Samaras & Roberts, 2011, p. 43). Self-study is paired with narrative, which creates order out of experiences. For this research, we define narrative as a representation of experiences. Narrative analysis is a way of making sense out of these ordered representations (Connelly & Clandinin, 1990; Hendry, 2010). In general terms, narrative analysis addresses two questions: “What is the story?” and “Why is the story told” (Franzosi, 1998, p. 532)? Data for analysis include course analytics and anonymous student comments, unsolicited and submitted through end of term course evaluations. Our data are limited to Blackboard Connect and Canvas reports; regrettably, we did not reliably document our instructional time in the course while offline (e.g., planning, reading, marking papers).

At the start of each course, we open SOUL up to discussion and throughout the term receive a range of comments and insights. In addition, we periodically receive research papers (assignments) from students that focus on dimensions of SOUL (e.g., Christen, 2013). The vast majority (i.e., 10:1) of student responses to SOUL can be described as advocacy— students advocate for SOUL. For instance, one student volunteered at the end of the course in 2013: “I appreciated SOUL; I think it helped me hang onto my sanity this semester. It was refreshing to see people value quality over quantity re: posts.” Another wrote in 2014 that they liked SOUL “so much that I emulated it for my own classes. But I call it SUIL instead (Slow Ubiquitous Inquiry-based Learning).”

At the same time, there are students who are critical of SOUL, noting the unexpected regulation of time and access. For instance, a student commented at the end of 2013:

while I agree with the SOUL principle in theory, enforcing it in a top-down manner is pretty disrespectful to adult learners - many of whom have jobs, families, professional obligations, etc. Being told to ‘not post on Mondays/Tuesdays, during reading week, or more than twice per week’ limits the ability of many people to post.

For various reasons, online courses developed over time by playing on anticipations of deregulation and liberty of access. Some students are certainly frustrated with the disincentives and regulation of online interactions. They report that they enrolled in an online course so they could be online “any time” or just-in-time. In this regard, SOUL affects asynchronicity and polychronicity.

Natural cycles and rhythms in human life have developed over time. Circadian rhythms reflect a complex of bio- or natural rhythms and cultural rhythms. Rhythms that move humans to rest and sleep are generally natural while rhythms that move us to play, study, think, and work are generally cultural. For instance, the work week and school week shape a cycle of play and recreation for weekend warriors. Yet given that most of the students enrolled in the online courses we teach are professionally employed, weekends are convenient times for reading, planning, and

posting.

By minimalizing or suppressing activity on Mondays and Tuesdays, SOUL generates a rhythm to the online course that is necessarily missing without the intervention. Course data suggest a mix of conventional and SOUL rhythms. Consistently, Fridays reduce activities to the lowest in the week. Tuesdays, a SOUL day, reduce activities to the second lowest. The third lowest tends to be Sundays. Week to week and end of term data demonstrate that the intervention works, at least in terms of quantity.

Minimalizing or suppressing course activity works, but what of faculty experiences? What of the regulation of demands on instructional time? What of the regulation of the intensity of pace of instructional time? In the balance of this section, we focus on our experiences as instructors and primarily on how SOUL shapes the quality and quantity of our instructional time.

Our experiences vary, quite differently in many ways depending on our work patterns or rhythms. Of course, like the students, our perspectives on the intervention differ but we also have to model the curbing or suppression of course activity on the SOUL days. We realized a time savings on these days but was there a total reduction of instructional time overall for each of us? As we realized a time savings, did SOUL slow the pace of the course? Monday-Tuesday SOUL days provided a means of slowing the demands and response burden over the weekends. We realized mixed results in balancing work lives and personal lives. We differed in reductions of time *and* effort. The next phase of SOUL challenges us to develop labour-driven apps for monitoring instructional time.

CONCLUSION

In our experiences in teaching online courses, in about 2011 we felt the volume of time we found ourselves and students allocating and the intensity of the pace of the courses were neglected. In terms of self-efficacy, we felt we had autonomy over the substantive dimension but somehow lost control over the temporal dimension. The effects on us were compounding and we had to assume the same for the students. One might say CTP is characteristic of academic life under new conditions and forms of management (Petrina, Mathison, & Ross, 2015). So we intervened with SOUL. In this article, we asked, how does SOUL regulate the amount and pace of instructional time and learning time in online courses?

By and large, we found students advocating SOUL throughout the course. Exceptions counter with expectations of deregulation and liberty of access in online learning. Our own advocacy is inherent in the intervention. In this paper, we focused on an analysis of SOUL rather than advocacy. SOUL is a reality check on self-organized learning environments (SOLE) (Mitra et al., 2010). While the tongue-in-cheek Slow Internet Movement (SIM) and itinerant ‘slow netters’ challenge current carriers’ and service providers’ infatuation with speed, SOUL offers a mode of being with slowness (NPR, 2011). And although SOUL and SOLE are philosophically compatible in being rule-based and consensus-based, the latter tends to neglect the problem of time in children, students, and teachers. SOLE overlooks the implications of hyper-learning, hyper-teaching, and hyper-parenting (Honoré, 2008).

In the final analysis, we stress that instructional time and learning time, or total educational time, have a variety of superficial and profound implications for individuals, collectives, and the environment. In the chapter on the workday and overwork in *Capital*, Marx offers a hypothetical comment by an employee to an employer: “What you gain in labor I lose in substance” of life (p. 234). Repeated as a mantra, it is a reminder to online educators that a healthy length of the workday

begins with a containment of time allocated to each course. Rather than disposing inordinate amounts of time into online learning and teaching, SOUL tests the workers' agency in regulatory environments.

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¹ *O*NET Dictionary of Occupational Titles* (2007, p. 231) scope of functions for communications or online instructors:

1. Planning evaluating, and revising curricula, course content, course materials, and methods of instruction
2. Compiling bibliographies of specialized materials for outside reading assignments
3. Preparing course materials such as syllabi, readings, and assignments
4. Preparing and delivering image, text, and sound media for downloads and mobility
5. Initiating, facilitating, and moderating discussions
6. Responding to student inquiries and questions (i.e., providing access that simulates "office hours" to advise and assist)
7. Evaluating students' interactions, assignments, and papers
8. Maintaining student records and grades
9. Keeping up with developments in the field
10. Collaborating with colleagues to address teaching and research issues
11. Conducting research
12. Participating in institutional policies, departmental matters, and academic issues.