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Leadership, Contexts, and Learning - Part 2. Theories of Learning, Channels, and Curricula

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Theories of Learning, Channels, and Curricula

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Abstract

In this second of a two-part essay (see Starr (2020a[1]) for part 1) a systems-informed discussion of learning leadership is presented. I review the components of a system which consist of inputs, transformation, outputs, feedback and contextual environment, and argue that from a system perspective learning leadership emerges from interactions among elements particularly contextual variables. The concept of context is expanded to include the theory of learning applied, i.e., pedagogy, andragogy or heutagogy, and the communication channel used, i.e., face-to-face, virtual/online, or hybrid/blended. Learning leadership is also influenced by environmental context variables such as threats to health and safety, financial and economic losses, political polarization, and cultural characteristics. The paper concludes with examples of how a systems approach can be used to select leadership content followed with examples for prototypical undergraduate, master and doctoral leadership courses.

Leadership Learning as a System

The explicit academic objective of Higher Education Institutions (HEIs[a]) and professional workplace education is student learning. While the prevailing premise is that a student will learn when a teacher delivers content that is articulated via learning objectives, this essay argues that learning can be more effectively understood as a dynamic system and that leadership is learned when it emerges from the interactions of multiple influencing elements and forces. In this framework, learning leadership is ***not the sum*** of a linear sequence such as *A + B + C = learning leadership*. Rather, it ***is the product*** of interactions among many variables such as *A*

[a] HEI is the term used in Europe and applied in this paper to designate a Higher Education Institute and organization that provides higher, postsecondary and tertiary education. "HEIs include traditional universities and profession-oriented institutions, also called universities of applied sciences or polytechnics": https://www.igi-global.com/dictionary/inciting-grassroots-change/13097.

x B x C x $N_{a\text{-}z}$ = *learning leadership*. The implications of this include that the elements in this system are interdependent and non-linear, i.e., no single part or sum of a group of parts causes learning, and efforts to improve any of the parts separately will not improve the whole of learning leadership. In this perspective, leadership becomes evident when there is new understanding, behavior, values, attitudes, and preferences that support one's capacity to formulate and address leadership problems and opportunities (Berger, 2017[2]).

In a systems approach to learning leadership, the context in which education takes place is one of the important and co-producing elements. When the learning context is complex, unordered, and ill-structured, linear analytic thinking becomes challenged. Yawson (2016[3]) noted how differing contexts have been affecting leadership research for decades. He wrote, "The linear approach to leadership has been the dominant premise on which leadership research has been conducted. However, starting from the early 1990s, there has been an emerging paradigmatic shift to the nonlinear epistemology of practice and the effect on 21st-century organisations (p. 262)."

Citing noble laureate Herbert Simon, Vandenbroek (2015[4]) noted that in the natural sciences, complexity, "when correctly viewed (enables one to see) … simplicity; to find pattern hidden in apparent chaos (Simon 1996:1)." However, when complexity exists in social sciences, management and leadership, this model of thinking is inadequate to address complex problems. For this reason, "systems thinking (emerged as) a rebellion against the objectionable habit of reductionist sciences to suppose that there is always some order hiding behind the disorder of the visible world (Vandenbroek, 2015: 5)."

The importance of context and of the systems approach as an alternative way to think about and to learn leadership were highlighted in 2002 when the Academy of Management released *Academy of Management Learning and Education* (AMLE), a new peer-review journal. For Volume 1, Number 1, the editors presented an interview conducted by Glenn Detrick (2002[5]) with Russell L. Ackoff who was described as,

> one of the pioneers in management education (and) one of the founders of operations research and systems thinking, linking science and business ... who provides a particularly useful perspective for this the first issue of the *Academy of Management Learning and Education* because he challenges much of current thinking about teaching and learning in terms of what is effective and what isn't when the ultimate objective is to improve the learning process (p. 56).

Ackoff challenged a fundamental premise of higher education that,

> There is the implicit assumption in most educational institutions that learning is the converse of teaching, that an ounce of teaching produces an ounce of learning. The fact is that teaching is the major obstruction of learning. Most of what you're taught you never use and is irrelevant, and what you do use you've learned on the job, usually in an apprenticeship relationship. So, the whole concept of education as being taught

> is wrong… some adults learn in university not because of the school or university, but in spite of it. People learn from others by following their curiosity, but they learn very little from courses. Certainly, very little that is useful (p. 56).

Ackoff and Greenberg (2008[6]) added to this contextual perspective. They noted "we learn a great deal on our own, in independent study or play … interacting with others informally … sharing what we are learning with others and vice versa … by doing by trial and error … and by apprenticeship (p. 4-5)." Motivated by self-determined interest or other reasons, people have the competency and capacity to informally but deliberately exhibit the full range of cognitive processes that contribute to leadership including abstract thinking.

A concept studied within cognitive-psychology and applied to performance domains such as chess, music, and sports, *deliberate practice* has been expanded to general business such that by its application "leaders can improve their ability to win over their employees, their peers, or their board of directors (Ericcson, Prietula & Cokley, 2006: 114[7])." These researchers were referring to self-imposed and demanding activities aimed at explicitly improving current performance weaknesses. Rather than merely spending more time doing one's job, deliberate practice activities focus on identifying and altering performance deficiencies and automatic and suboptimal behaviors. As there is no formal instructor or pre-determined course content, this self-determined learning requires the leadership learner to set personal learning objectives and to discover ways to meet them. Keith, Unger, Rauch and Frese (2016[8]) reported a longitudinal study of 132 German business owners who engaged in informal deliberate practice of their entrepreneurial leadership skills and behaviors. Their research showed that "deliberate practice pays off (in terms of organizational improvement and success) particularly in dynamic environments (p. 516)." They further noted,

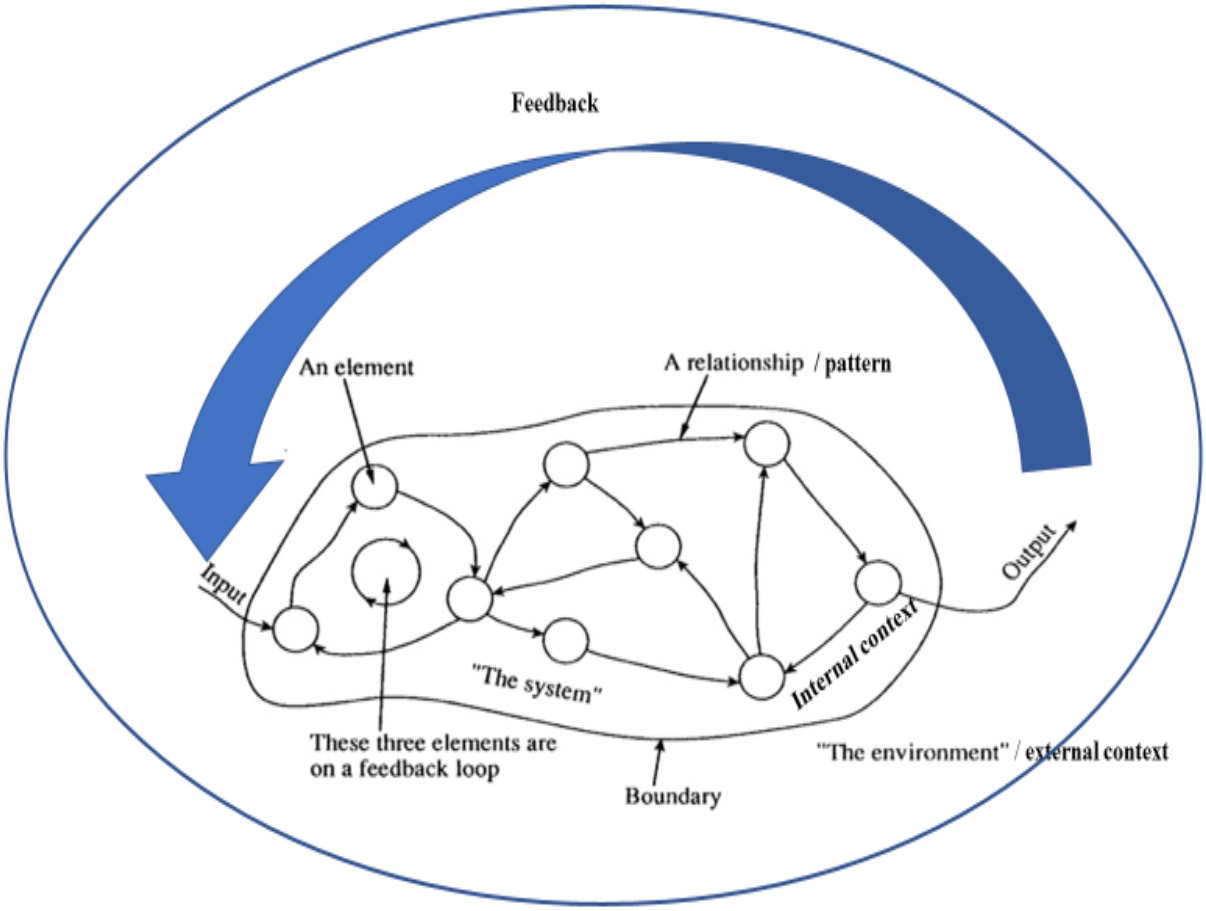
> one needs to engage in deliberate practice in a self-regulated and informal manner, that is, by adopting the goal of performance improvement, identifying areas of possible improvement, and designing as well as executing deliberate practice tasks that are suitable for performance improvement (e.g. mental simulations of difficult situations with clients (p. 519).

Whereas informal learning has been essential for human development and survival, formal learning is a social construction created to meet the demands of the industrial revolution for mass/collective education. Ackoff's argument is that while children and adults can learn through formal HEI instruction, there is no tested theory that one learning approach is better than another. Research by Choi and Jacobs (2011[9]), moreover, suggests the "relationship between the two has been overlooked, because they have been viewed as separate entities (p. 239)." Studying middle managers in a banking system they found a significant order effect such that engaging in formal (executive education) learning has positive impact on subsequent informal learning.

System Architecture

Learning leadership is a system; a system is a model of reality that can be represented by its structure consisting of inputs, transformation process, outputs, feedback, and contexts (Figure 1). The transformation process between the inputs and outputs involves elements that form interconnected relationships and patterns that may have internal feedback loops. A system has a boundary which may be closed or open, and it has an internal context and an external or containing environmental context. A system has a feedback loop such that outputs have effects on subsequent inputs. The implications of a system view of leadership learning are that the effectiveness of each element depends on how it fits into the whole, and the effectiveness of the whole depends on how each element functions.

Figure 1. Representation of a System



A model of the system of learning leadership is presented in Figure 2. The inputs are people, resources, ideas and other elements that come together for education. The transformation process concerns interactions and interdependencies

among four essential elements: students, teachers, content, and the internal context. The outputs include alumni with academic credentials designating their learning, as well as scholarship, research, and leadership applications generated by the interactions among the elements. The learning system has a feedback loop which enables the inputs and transformation to adapt to changes due to learning experiences.

Figure 2. Learning Leadership System

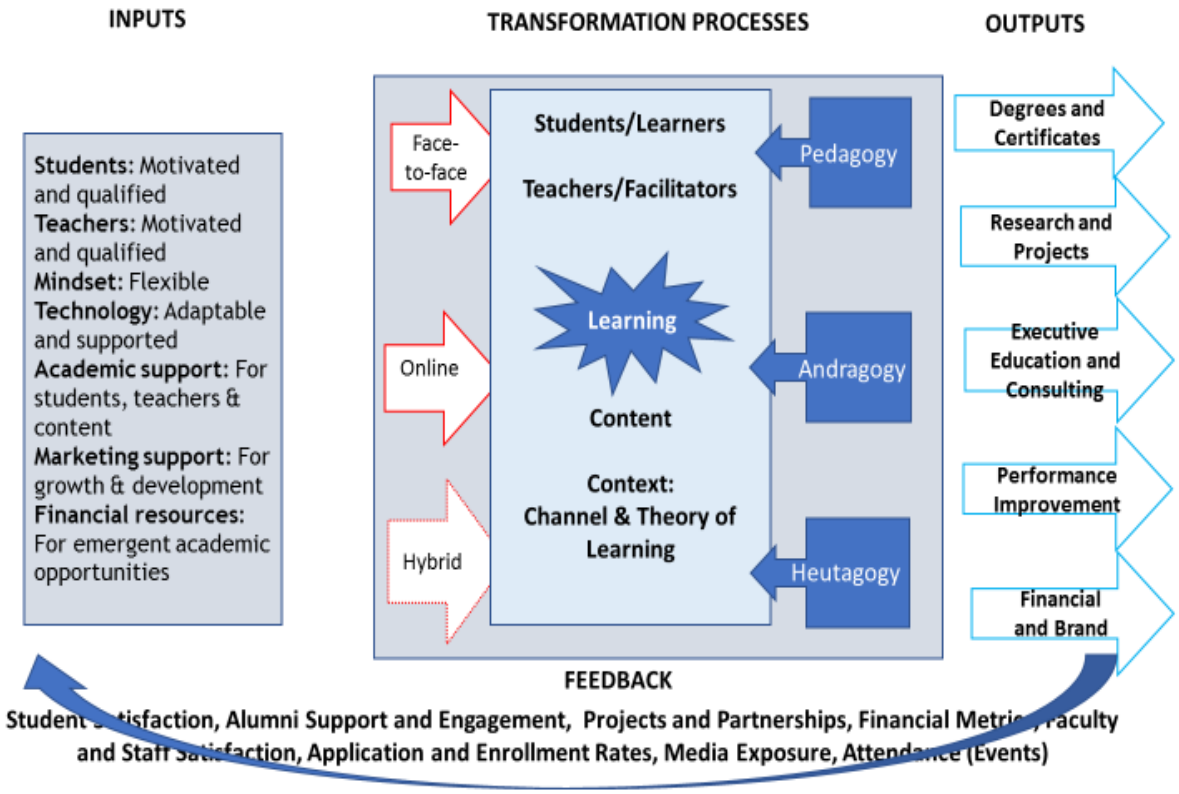


Figure 3 presents a view of the leadership learning system with additional variables in the external (containing) context that inform and influence the system's behavior or performance. Examples of influences include threats to health and safety from the Covid-19 global pandemic, environmental harm from pollution, fires and floods, political polarization, economic and financial instability and losses, policy confusion regarding the process of education, and the social and ethical climate. Regarding interactions among these influences, the United Nations (2020[10]) reported,

> The COVID-19 pandemic has created the largest disruption of education systems in history, affecting nearly 1.6 billion learners in more than 190 countries and all continents. Closures of schools and other learning spaces have impacted 94 per cent of

the world's student population… Similarly, the education disruption has had, and will continue to have, substantial effects beyond education. Closures of educational institutions … affect the ability of many parents to work … and as fiscal pressures increase, and development assistance comes under strain, the financing of education could also face major challenges, exacerbating massive pre-COVID-19 education funding gaps (p. 2).

Figure 3. External Contextual Influences on the Learning Leadership System

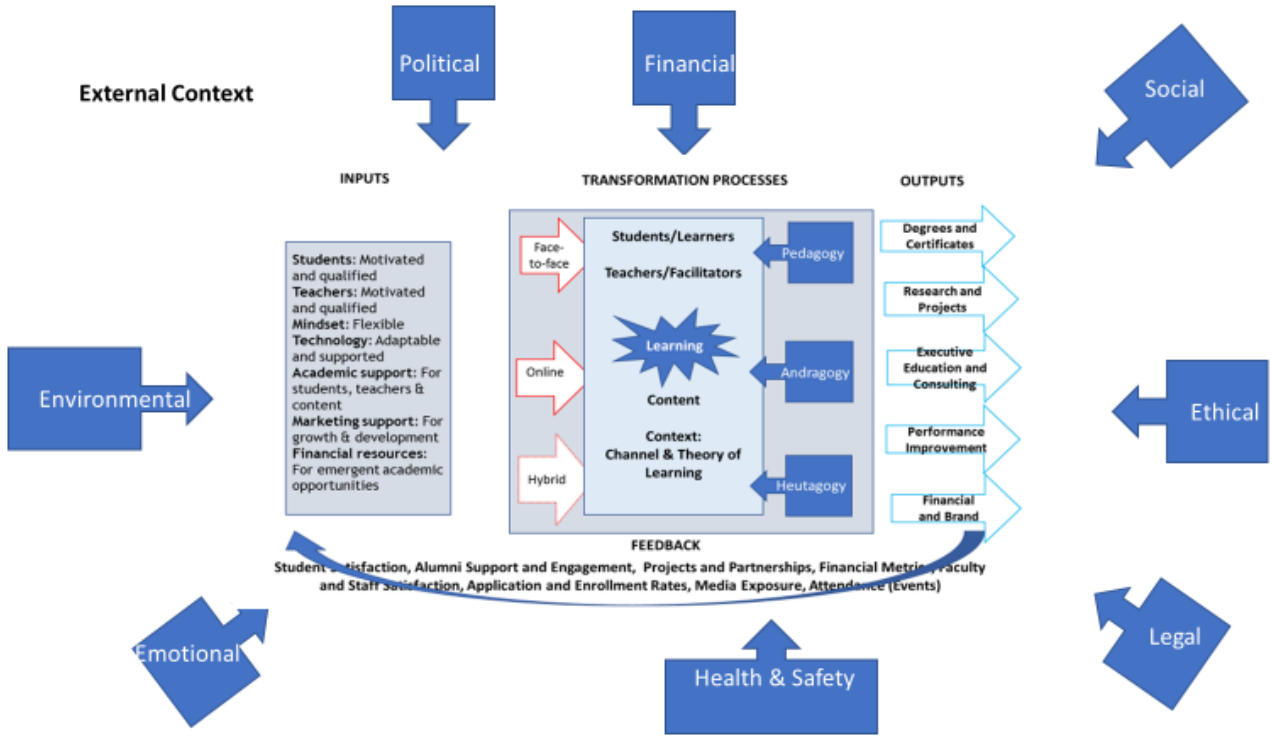
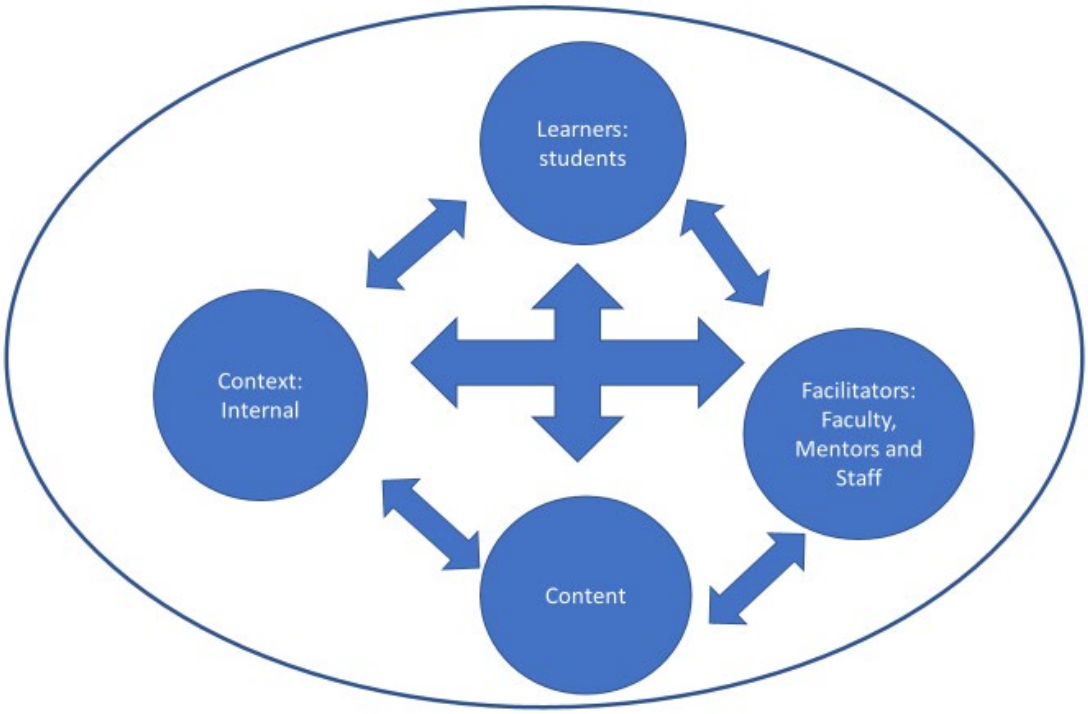


Figure 4 presents the learning leadership system's transformation process. The critical elements interacting are students, teachers, content, and the internal context which includes the channel of communication and the theory of leadership applied. The channel or medium of communication concerns face-to-face (f2f), fully virtual or hybrid/blended. For example, when the contextual channel of education is f2f, the learning process takes place primarily in a traditional classroom and/or in a "clinical" environment with physical meetings between students and instructors that support verbal and non-verbal observation, modeling and feedback of leadership soft skills, i.e., "that relationship factor involved in human interaction required to achieve positive outcomes from the leadership process (Brunghardt, 2011:1[11])." When education is fully virtual/online, conceptual and reflective education can occur, but recognizing leadership soft skills and feedback may be difficult even with sophisticated technology. A hybrid/blended channel means leadership education is experienced

partly f2f and partly online although the distribution or percent of each can vary significantly. Another element of the internal context of the transformation concerns the theory of learning applied by instructors. Three theories that are discussed later in detail are pedagogy, andragogy and heutagogy.

Figure 4. Learning Leadership Transformation Process



Core Elements of the Leadership Learning Process

Student/Participant/Learner

The American Council for Education (2020[12]; see also Soares, Gagliardi & Nellum, 2017[13]) noted that for the past 50 years, the demographics of students attending HEIs in the United States have been changing. While the "traditional student," described as one who enters college directly from high school and is between the age of 17 and 21 years, had been the norm, research is showing a shift to "nontraditional students" or "post-traditional learners" who are "aged 25 years or older, care for dependents, work full time while enrolled, and are often connected to the military (para. 1)." For example, in 2014, Caruth (2014: 22[14]) reported that "almost half of today's overall college student body are adult learners." Two years later, Gagliardi and Soares (2017[15]) reported that post-traditional learners make up close to 60 percent of enrolled undergraduates. Two years later, the Postsecondary National Policy Institute (PNPI, 2018), citing the U. S. Department of Education,

National Center for Education Statistics (2018[16]) reported that traditional students "make up only 15% of the undergraduate population. The remaining 85% of students are considered post-traditional." These people attend HEIs and community colleges and are described by PNPI (para. 1[17]) as

> a diverse group of adult learners, full-time employees, low-income students, students who commute to school, and working parents. In general, post-traditional students have one or more of the following characteristics: they delay enrollment in college after high school, they attend part time for at least part of an academic year, they work full time while also enrolled in school, they are financially independent or they have dependents (spouse and/or children).

The earliest theories of individual differences in learning were biological and have been promoted for more than two thousand years including by Greek philosophers Plato, Socrates and Aristotle. Martin Seligman considered the father of Positive Psychology and Positive Leadership (Kim, 2012[18]), noted, "When I started my work in Positive Psychology, my original view was closest to Aristotle's (Seligman, 2011: par. 1[19]). With the development of sophisticated technology which enables neuroimaging and single cell recording, cognitive neuroscientists are now able to describe cellular level changes that help explain individual capabilities and differences. This has blurred some of the previously held boundaries between bio-psycho-social influences which means explanations and attributions of individual leadership are now made to combinations of the following each of which has been shown to have underlying genetic and biological structures: Cognitive approaches which focus on the mental structures and processes including how we encode, retain and retrieve information; psychological and affective approaches which concern emotions and motivations; social approaches which focus on the relationships and interactions between people in leadership development and performance; and behavioral approaches which focus on the actions of leadership.

One area of research that contributes variability to the characteristics of individual student learning is examined via the broad lens of diversity. According to research by Parker (2018, reported by Krings, 2018[20]) diversity can "include race, ethnicity, gender, religion, sexual orientation, geographical representation, religion, political beliefs and more. However, race and gender are always near the top of concerns (para. 3)." The American Council on Education (ACE) and the American Association of University Professors (AAUP) reported research from 2000 (see Section 10[21]) indicating "faculty members strongly believe that racially and ethnically diverse classrooms enrich the educational experience of white students" and "racial and ethnic diversity has a direct positive influence on student outcomes and students beliefs about the quality of education they received." These beliefs are supported by the academic and practice literature about differences in leadership style based on gender (Walker & Aritz, 2015[22]), and based on race including African Americans (Walters & Smith, 1999[23]), Asians (Asare, 2018[24]) and Latino (Tapia, 2020[25]) leaders.

Another characteristic of learning leadership concerns diversity of learning style preferences which refers to the "characteristic strengths and preferences in the ways [people] take in and process information" (Felder, 1996[26]). Several theories have been proposed and continue to be applied that classify people into distinct categories of how they prefer to learn. However, the research evidence on learning style is weak and often conflicting. For example, research indicates that teachers do a poor job of assessing learning styles of students (Papadatou-Pastou, Gritzali & Alexia, 2018[27]); matching learning style to learning objectives does not necessarily improve performance outcomes (Pashler, McDaniel, Rogher & Bjork, 2008[28]); student studying behavior does not correlate with their assessed learning style (Husmann & O'Loughlin, 2019[29]); and matching the type of instruction to a student's learning style did not make a difference on students' comprehension of material (Rogowsky, Calhoun & Tallal, 2015[30]). Nevertheless, two models will be presented because there is ample evidence that people express preferences for how they want to receive their educational information (Willingham, Hughes, & Dobolyi, 2015[31]).

Fleming and Mills (1992[32]) suggested the VARK model based on classification of preferences following completion of a questionnaire which allowed respondents to be assigned to one of four groups although a learner can have more than one preference for learning. The groups are visual (V), auditory/aural (A), reading/writing (R), and kinesthetic (K). The preference group and a description of characteristics from the University of Kansas Department of Educational Leadership and Policy Studies (2020[33]) is in Table 1.

Table 1. Summary of VARK Learning Style Preferences

Preferred Learning Style	Description
Visual Learner Prefers graphics, charts and diagrams to support learning leadership	Visual learners best internalize and synthesize information when it is presented to them in a graphic depiction of meaningful symbols including arrows, charts, diagrams and other visualizations of information hierarchy, but not necessarily to photographs or videos.
Aural/Auditory Learner Prefers to hear information about leadership that is to be learned	Auditory (or aural) learners are most successful when they are given the opportunity to hear information presented to them vocally. Because students with this learning style may sometimes opt not to take notes during class in order to maintain their unbroken auditory attention, educators can erroneously conclude that they are less engaged than their classmates. However, these students may simply have decided that notetaking is a distraction and that their unbroken attention is a more valuable way for them to learn.
Reading/Writing Learner Prefers to learn leadership via reading written and online information	Students who work best in the reading/writing modality demonstrate a strong learning preference for the written word. This includes written information presented in class in the form of handouts and PowerPoint slide presentations as well as the opportunity to synthesize course content in the completion of written assignments. This modality also lends

	itself to conducting research online, as many information-rich sources on the internet are relatively text-heavy.
Kinesthetic Learner Prefers to learn leadership by using multiple senses involving direct skill-based project activities	Kinesthetic learners are hands-on, participatory learners who need to take a physically active role in the learning process in order to achieve their best educational outcomes. They are sometimes referred to as "tactile learners," but this can be a bit of a misnomer; rather than simply utilizing touch, kinesthetic learners tend to engage all their senses equally in the process of learning. Because of their active nature, kinesthetic learners often have the most difficult time succeeding in conventional classroom settings. These students often thrive in scientific and project activities, as the skills-based, instructional training that occurs in these settings engages them in productive ways.

Research using the VARK model has mainly indicated that preferences are varied so instructors should vary their teaching approaches. Studying undergraduates in an economics program who completed the VARK assessment, Wright and Stokes (2015[34]) noted, "to satisfactorily develop skills in economics it is important to recognise this difference in student preferences for learning styles and to apply a variety of learning styles and opportunities for students to learn and develop skills (p. 62)." Studying medical students, Prithishkumar and Michael (2014[35]) also found a wide variety of preferences for learning and recommended that instructors should appreciate that "Multiple modalities of information presentation are necessary to keep the attention and motivation of our students requiring a shift from the traditional large-group teacher-centric lecture method to an interactive, student-centric multimodal approach (p. 183)."

A second model is based on experiential learning often described as learning through *reflection on doing* (Kolb, 1984; 2015[36]). Experiential learning is distinct from rote or didactic learning in which the learner is primarily passive. Hands-on learning can be a form of experiential learning when "it is the process whereby knowledge is created through the transformation of experience" (Kolb, 1984, p. 38[36])."

In response to problems and opportunities, this model suggests that people engage in a learning cycle in which *grasping* and *transforming* the learning content are involved. Grasping involves concrete experience and abstract conceptualization; transforming involves reflective observation and active experimentation. The cycle involves moving from Concrete Experience to Reflective Observation to Abstract Conceptualization to Active Experimentation (Figure 5). While ideally all four activities occur, a person may develop strengths leading to preferences and priorities which produces four learning categories that may be identified by completing the Kolb Learning Styles Inventory (Kolb, 2015): **Diverging Style** (feeling and watching), **Assimilating Style** (thinking and watching), **Converging Style** (thinking and doing) and **Accommodating** (feeling and doing). The characteristics of the four categories of this

cycle are described by the Carleton University Education Development Center, (2020[37], Table 2).

Figure 5. Kolb's Learning Cycle and Learning Styles

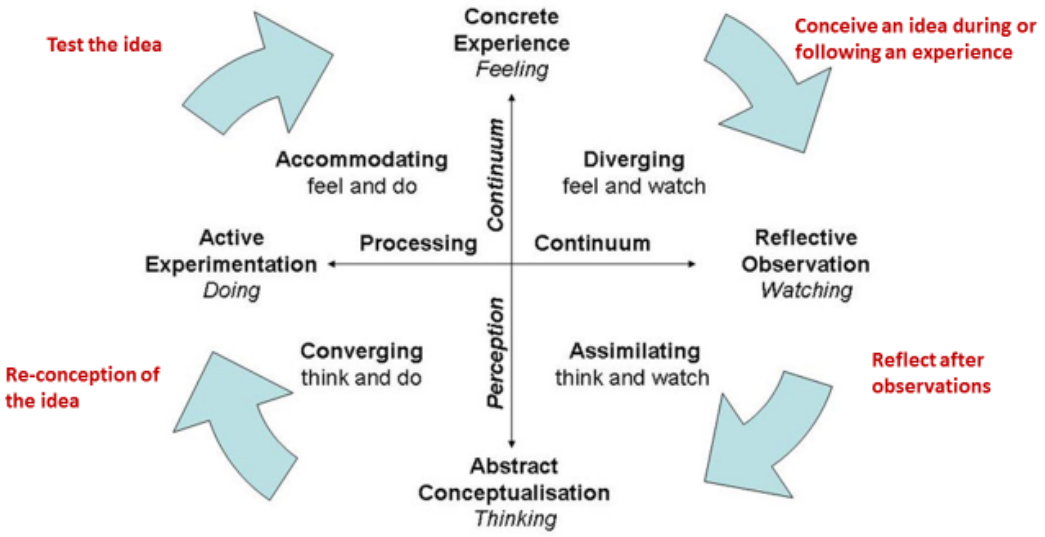


Table 2. Kolb's Learning Styles

Diverging (feel and watch) Looking at issues from various perspectives, characterized as sensitive, with a preference to watch rather than do something. Those with strength in this learning style have a better ability to generate ideas and engage in brainstorming, enjoy gathering information, are often interested in people, imaginative and emotional, arts-oriented, have excellent group-work skills, and are open to concrete feedback. **Assimilating (think and watch)** Less focused on people, and more driven to ideas and abstract conceptualization. Strength in this learning style is more common in information and science careers, with preference on readings, following logical approaches, being concise, and with the ability to explore and manipulate analytical models. **Converging (think and do)** An ability to solve complicated problems, with a preference for technical engagements that do not require social interaction. Individuals with strength in this learning style are often good at using technology, are interested in experimentation of new ideas and in practical application of theory.

Accommodating (feel and do)
A hands-on learning style, relying on intuition or "gut" and not much on logic. Those with strength in this learning style often have a preference to practical, experiential approaches, with attraction to new experiences and challenging engagements while carrying out tasks. They often rely on others for information and are not interested in carrying out their own analysis.

Individual motivation and purpose are also important for learning leadership. Regarding this, there are three labels that describe how any participant approaches or joins a leadership learning opportunity. *Intending to* join a learning system refers to participation that is voluntary and purposeful. *Intended for* a learning system is applied when the purpose or motivation is directed by another agent or organization who assigns the participant. The learning approach of a participant may be *incidental* when there is no intended or explicit purpose or requirement for participating. An example of this last label would be the person who observes a new supervisor or organizational leader take over from a previous person. The learning that occurs is informal and without explicit or previously considered intention (Hall, 2016[38]). Participants in a learning experience may have elements of all three purposes, and an individual's interests can change during a learning experience.

Teacher/Instructor/Facilitator

Estimating that a classroom teacher makes thousands of nontrivial decisions daily, Danielson (1996[39]) described teaching as a complex activity. Referring to the comparison of teaching to surgery by renowned educator, Madeline Cheek Hunter, (see also Goldberg, 1990: 43[40]) Danielson noted that in both professions,

> you think fast on your feet and do the best you can with the information you have. You must be very skilled, very knowledgeable, and exquisitely well trained, because neither the teacher nor the surgeon can say, 'Everybody sit still until I figure out what in the heck we're gonna do next.'

Writing for the Association for Supervision and Curriculum Development (ASCD) which supports educators and education in 129 countries, Scherer (2003[41]) presented 9 characteristics that inform an instructor's effectiveness (Table 3).

Table 3. Characteristics of Effective Teachers

Characteristic	Description
Willingness to put in the necessary time	Like other professional disciplines, teaching requires investment of time and energy to prepare, evaluate student work, and to support students outside class.
Love for the group they teach	Teaching higher education or in the professional workplace requires a teacher who feels connected and attracted to adult learners some of whom who may possess more knowledge or expertise in their respective domains than the instructor.
Culturally effective management style	This refers to the teacher's capacity to create and sustain a culture of respect that flows from teacher to students, students to teacher, students to students, and everyone to guests.
Positive relationships with colleagues	A teacher must depend on and support other teachers and administrators as a source of information, enrichment, sometimes solace, advice and collegial sharing.
Consistent excellence	Better quality teachers present consistently outstanding performance over the years by integrating new methods in an ever-changing profession into their successful practices; they also show dedication to their work, flexibility, and the willingness to grow in the face of difficulty and change.
Expert use of instructional methods	Better quality teachers use of a variety of instructional methods because they recognize that no single teaching method or approach works best for every teacher with every student.
In-depth content knowledge	They possess a solid command of content; anticipating questions and obstacles
Capacity for growth	They are lifelong learners and are vigilant to emergence of solid information about teaching and learning because teaching undergoes constant change
Steadiness of purpose and teaching personality	Great teachers are not necessarily performers; rather, they hold students' attention through subject mastery, skillful lesson design, actions that demonstrate caring, and an honesty that reveals their individual personality

While the 9 teacher characteristics are suggested to contribute to the dynamic interactive relationship that co-produces learning, some suggest there is a separate set of characteristics that go beyond the "In-depth content knowledge" described by Scherer (2003). For approximately 35 years, researchers have examined the idea of "content knowledge unique to teaching – a kind of subject matter specific to professional knowledge (Ball, Thames & Phelps, 2008: 389[42])." Using the phrase "pedagogical content knowledge (PCK)," Shulman (1986[43]) was first to suggest "that

special amalgam of content and pedagogy that is uniquely the province of teachers, their own special form of professional understanding (Shulman, 1987:8[44])." Shulman (1986[37]) wrote about this special proficiency including,

> the most powerful analogies, illustrations, examples, explanations, and demonstrations — in a word, the most useful ways of representing and formulating the subject that makes it comprehensible to others . . . Pedagogical content knowledge also includes an understanding of what makes the learning of specific topics easy or difficult: the conceptions and preconceptions that students of different ages and backgrounds bring with them to the learning of those most frequently taught topics and lessons (p. 8).

Shulman's seven PCK categories which holds a systems perspective and so describes interactions among student/learner characteristics, content, and context are applied to learning leadership and presented in Table 4.

Table 4. Shulman's PCK Applied to Learning Leadership

Pedagogical Content Knowledge (PCK) consists of:
• General pedagogical knowledge of leadership, with special reference to those broad principles and strategies of classroom management and organization that appear to transcend leadership subject matter
• Knowledge of how differences among learners and their characteristics impacts leadership
• Knowledge of leadership educational contexts, ranging from workings of the group or classroom, the governance and resources of organizations, the environment of communities and cultures
• Knowledge of leadership educational ends, purposes, and values, and their philosophical and historical grounds
• Content knowledge of leadership theories and practices
• Curriculum knowledge, with particular grasp of the materials and programs that serve as "tools of the trade" for teaching leadership
• Pedagogical content knowledge, that special amalgam of content and pedagogy that is uniquely the province of teachers, their own special form of professional understanding that is relevant to leadership education

Content

A third essential element in the system of leadership learning is the learning content or *content knowledge*. This is the body of knowledge and information - facts, concepts, theories, and principles - defined as learning objectives and when measured are proposed to indicate how well students are learning leadership. Institutions, organizations, programs and courses commonly list *learning objectives* or *learning outcomes* using language and meanings drawn from an early framework of educational goals called Bloom's Taxonomy (Bloom, Engelhart, Furst, Hill & Drathwohl, 1956[45])

that was revised in 2001 (Anderson & Krathwohl, 2001[46]). Armstrong (2020[47]) notes that essential to describing learning objectives is use of specific "verbs and gerunds … 'action words' that describe the cognitive processes by which thinkers encounter and work with knowledge" (The Revised Taxonomy, 2001, para. 2). The updated taxonomy identifies two groups of critical learning variables: cognitive processes which are structured in six levels: to remember, understand, apply, analyze, evaluate, and create; and four types of knowledge: factual, conceptual, procedural and metacognitive. The six levels are commonly presented as a pyramid (Figure 6, Schroeder, 2018[48]) and the processes with knowledge groupings are presented as a table (Table 5) and wheel (Figure 7). Identifying learning outcomes using this approach "should allow institutions to determine what they expect students will achieve and to measure whether they have been successful in doing so" (American Council on Education, 2015[49]).

Figure 6. Cognitive Processes Hierarchy in Bloom's Taxonomy)

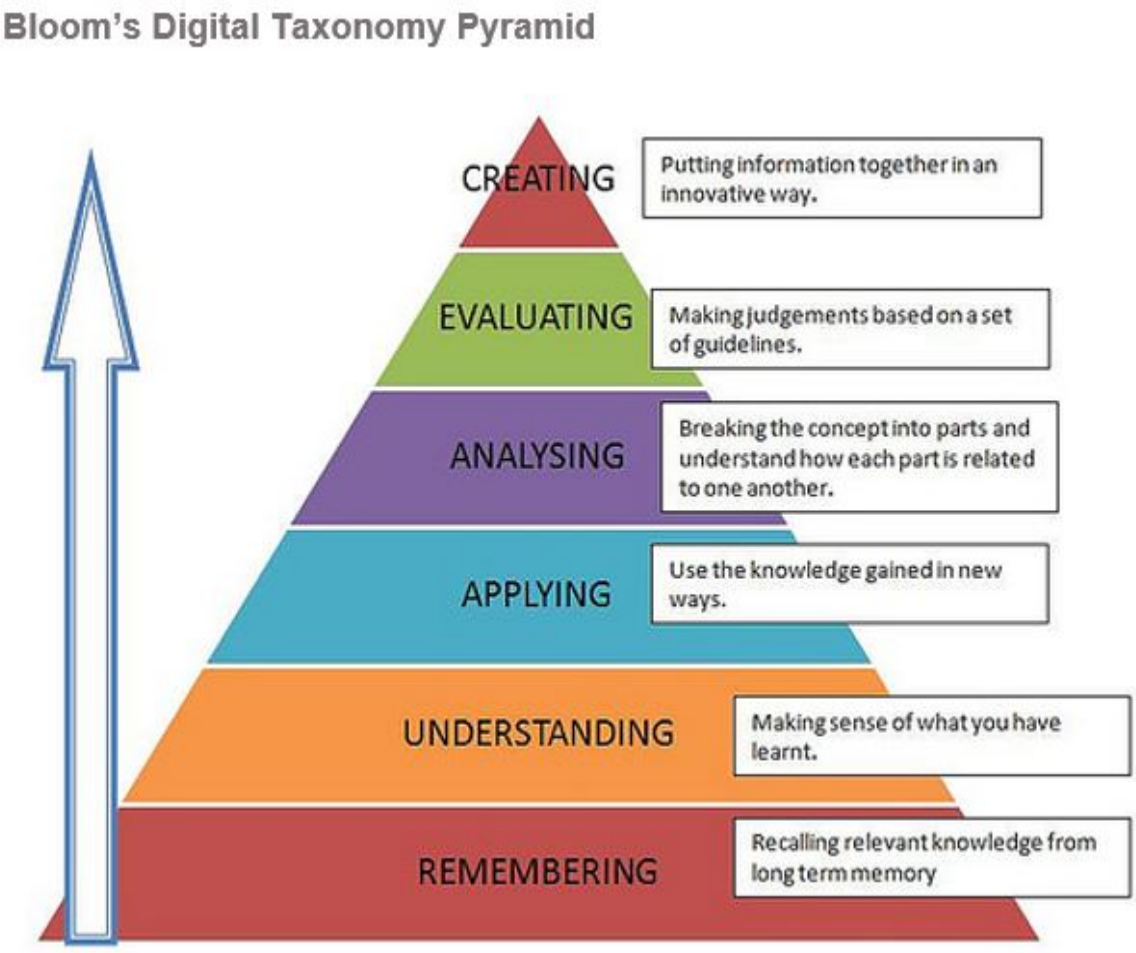
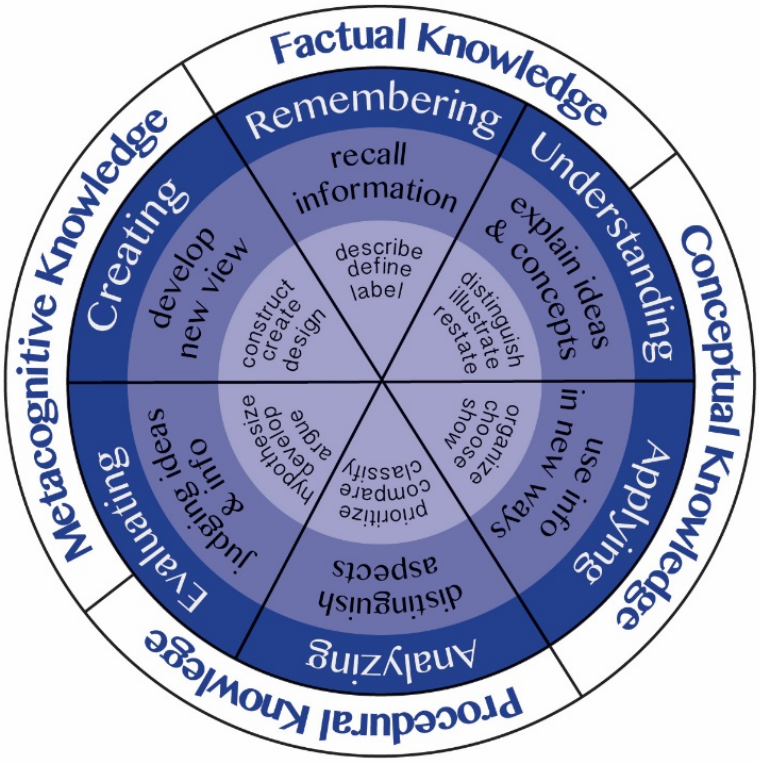


Table 5. Table of Cognitive Processes and Knowledge Areas of Bloom's Taxonomy

Knowledge Dimension	Cognitive Process Dimension					
	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual Knowledge						
Conceptual Knowledge						
Procedural Knowledge						
Metacognitive Knowledge						

Figure 7. Wheel of Cognitive Processes and Knowledge Areas of Bloom's Taxonomy



Moskal, Ellis and Keon (2008[50]) highlighted the linear causality presumed between meeting content objectives and learning: "Thus, direct assessment of learning, using appropriate outcome measures, indicates how well students are

attaining required knowledge and skills (p. 272)." Referring to the courses and programs within business school, they described the three categories of stakeholders to which learning outcomes are directed and why each is important. First, learning outcomes are important to *students* because this information helps them determine if they are meeting degree requirements and is a measure of progress in their education program. The premise is that this feedback helps students to plan their future goals. Second, learning outcomes are important to *faculty, program leaders, and the institution* because they are a measure of the strength and weakness of student performance. The premise is that this information helps to improve course and program offerings. Third, learning outcomes are important to the *external stakeholders* of an institution or program because they are a measure of the effectiveness of that program. The premise is that meeting learning objectives supports meeting the institutional mission which is part of responsible organizational oversight and governance.

Despite the widespread use of learning outcomes and the expectation that if teachers deliver these then students will attain required knowledge and skills, the process of measuring outcomes remains a significant challenge to the point that it has been called a "hot mess" (Lederman, 2019[51]). At the 2019 Academic Research Conference of the Senior Colleges and Universities Commission of the Western Association of Schools and Colleges (WASC), John Etchemendy, former Provost of Stanford University, now commissioner of the Western accrediting commission and a member of the federal panel that advises the U.S. education secretary, remarked,

> Whenever we try to directly measure what students have learned, what they have gotten out of their education, the effect is tiny, if any. We can see the overall effects, but we cannot show directly what it is (or) how it is changing (students) (Lederman, 2019: para. 6).

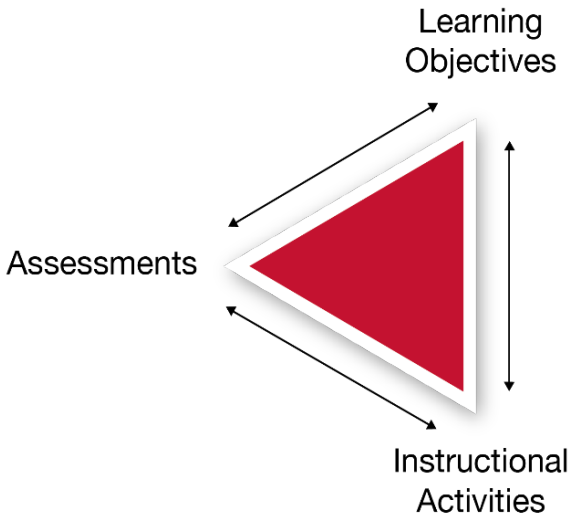
Lederman (2019[51]) also reported the comments of Natasha Jankowski, director of the National Institute of Learning Outcomes Assessment a partner of the Association of American Colleges and Universities: "Part of the problem is defining what assessment is and what it isn't -- or, more precisely, differentiating between different kinds of assessment: that used for individual and institutional improvement and that used for external accountability purposes (para. 7)."

To support any meaningful discussion of learning objectives or outcomes requires an operational definition of *learning* and specifically for this essay the meaning of *learning leadership*. This is not a trivial matter because learning is a difficult concept and there is considerable ambiguity about how it is understood and practiced. What is agreed by most scholars is that learning is a *process* (often linear), a series of actions, steps or changes that lead to a new situation or state that is different from where it began. The challenge is that learning is a *hypothetical construct*: developed by direct and indirect social, emotional, and sensory experiences; and only inferred from performance because learning cannot be directly observed.

Gross (2015[52]) provides an example of the prevailing meaning of the concept found throughout psychology education which is that *learning* is a "process by which relatively permanent changes occur in behavior and behavioral potential as a result of experiences (p. 175)." The phrase *relatively permanent* argues that for learning to be acknowledged, evidence of change must be demonstrated relatively consistently and relatively repeatedly. *Behavioral potential* refers to values, attitudes and preferences that are anticipated to lead to behavior. By extension, the prevailing meaning of **learning leadership** is the **process by which relatively permanent changes occur in leadership behavior, values, attitudes and preferences as a result of past experiences**. As there is no inherent direction to the process, what is learned about leadership is along a continuum from positive and productive to negative and toxic.

An important aspect of specifying leadership learning outcomes is the method by which the instructor tries to ensure the learning objectives are understood and met by the student. Carnegie Mellon University's Eberly Center for Teaching Excellence and Educational Innovation (2020[53]) argues that there are three interdependent elements (Figure 8) that instructors should use to articulate learning objectives to students: the specific learning objectives, the assessments, and the instructional activities.

Figure 8. Elements of Articulating Learning Outcomes



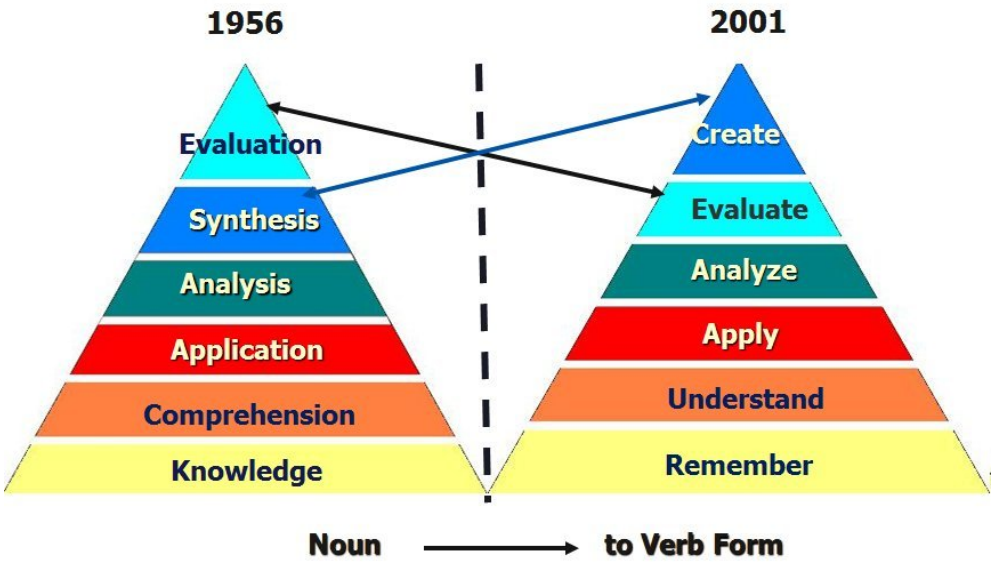
According to this model, to optimize the value of using learning outcomes, the instructor should define and describe the specific leadership competencies (knowledge and skills) the students should acquire by the end of a course or program. Assessments should be provided that will allow the instructor to check the degree to which the students are acquiring course or program leadership competencies, i.e., meeting the stated learning objectives. The instructor should select instructional strategies that will foster student leadership learning towards meeting the objectives.

Nevertheless, this contrasts with those who report that learning leadership depends on many variables including "such important elements as expert facilitation, contextual awareness, formal and informal support, real-world application, self-study, self-awareness, stress and celebration (Crosbie, 2005: 45[54])."

The implications of the prevailing meaning of learning leadership can be found in the thousands of HEI and workplace courses where leadership is taught. The fundamental expectation is that teaching courses and programs according to learning objectives enables students to acquire leadership values, attitudes, preferences, skills, behaviors, and styles, i.e., competencies.

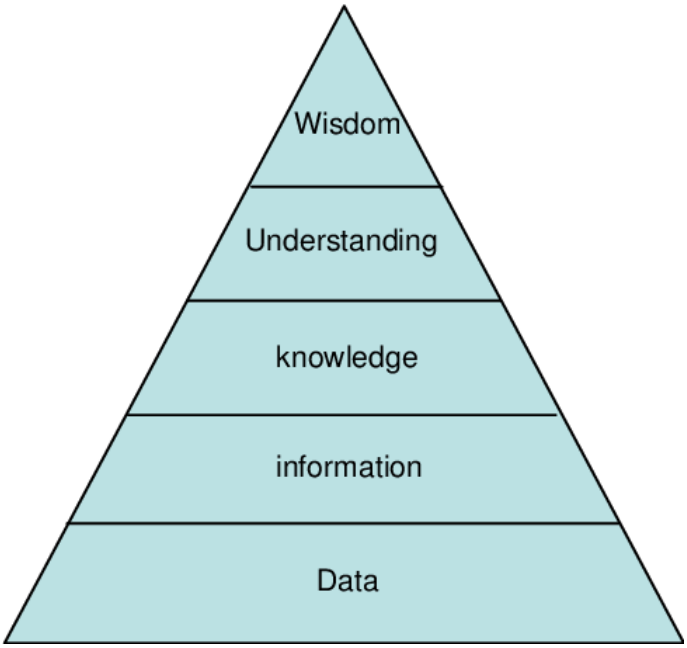
Bloom's original taxonomy (Bloom, Engelhart, Furst, et al, 1956) posited that as cognitive processes increased in complexity, *comprehension* led to *analysis* then to *synthesis*. As shown in Figure 9, when the taxonomy was revised in 2001 (Anderson & Krathwohl, 2001[55]), two language changes were made. First, the word *synthesis* was dropped from the core processes and integrated within the meaning of *create* "in order to reflect different types and levels of knowledge and take into consideration criticisms of the original taxonomy (Network of the National Library of Medicine, 2020; para. 1[56])." This poses a challenge because in systems approaches, *synthesis* refers to the process for addressing complex problems whereas *analysis* is the process for solving complicated problems. That these are two different, but related, cognitive processes is important. As Ritchey (1991: 21[57]) noted, "Analysis and synthesis … always go hand in hand; they complement one another. Every synthesis is built upon the results of a preceding analysis, and every analysis requires a subsequent synthesis in order to verify and correct its results."

Figure 9. *Understanding* in Bloom's Taxonomy



The second change was that the word *comprehension* became the verb *understand*. This also poses a challenge because in Bloom's learning objectives, to understand is considered a low-level cognitive process, while in the systems approach (Ackoff, 1989[58]; Housworth, 2004[59]), *understanding* is considered a high-level function (Figure 10).

Figure 10. *Understanding* in Social Systems



Gharajedaghi and Ackoff (1984: 5[60]) specifically addressed the importance of *understanding* as a higher cognitive process when engaging with organizational systems (in Housworth, 2004: para. 5[34]). They wrote,

> One can survive without understanding, but not thrive. Without understanding one cannot control causes; only treat effects, suppress symptoms. With understanding one can design and create the future ... people in an age of accelerating change, increasing uncertainty, and growing complexity often respond by acquiring more information and knowledge, but not understanding.

Bellinger, Castro and Mills (2004[61]) noted that reaching a shared understanding about the meaning of patterns of information and the capacity to understand principles of knowledge are necessary to attain wisdom. This is because *understanding* answers the question "why" rather than only 'what" or "how." They noted that understanding enables one to

> synthesize new knowledge from … previously held knowledge. The difference between understanding and knowledge is the difference between "learning" and "memorizing." People who have understanding can undertake useful actions because they can

> synthesize new knowledge, or in some cases, at least new information, from what is previously known (and understood) (para. 11).

Educators do not restrict *content knowledge* only to knowledge; many use the term as a shorthand to articulate characteristics of "knowledge" and "skills." A simple distinction would be that knowledge is theoretical and conceptual, and skills are practical and experiential. One can have *knowledge about* a subject, but this may not include the *skills necessary to apply* that knowledge to specific tasks.

Some argue that content knowledge "versus" skills is a false dichotomy in leadership practice because learning skills without content or learning content without skills is an abstract notion relevant only among academics. In social and professional work organizations, the two are a "locked pair" (Vavra, 2015[62]) because leadership knowledge and skills are inextricably connected and interdependent, and both and their relationships need to be understood across varying contexts. Oates (2010[63]; 2018: para. 4[64]) argues, for example, that a curriculum should integrate knowledge with applications in different contexts to support an environment "destined for constant change." Therefore, an education program that treats content, i.e., knowledge and skills, as independent or does not enable participants to learn how to integrate skills with knowledge in varying situations fails to appreciate the interdependencies of the complex challenges common to leadership.

There is general agreement that students in the 21st century need different content than taught to previous generations, and that sets of new skills such as digital fluency (Wang, Myers & Sundaram, 2013[65]) are essential to success in higher education, the modern workplaces, and possibly the workplace of the future. But there is considerable debate about which new skills are and will be most important and how to teach and learn these in HEIs; particularly when the skills concern learning and practicing leadership. The *Glossary of Education Reform* (2016[66]) suggested that ambiguity and confusion about content knowledge are common because

> "21st century skills" is a concept that encompasses a wide-ranging and amorphous body of knowledge and skills that is not easy to define and that has not been officially codified or categorized. While the term is widely used in education, it is not always defined consistently, which can lead to confusion and divergent interpretations. In addition, a number of related terms – including *applied skills*, *cross-curricular skills*, *cross-disciplinary skills*, *interdisciplinary skills*, *transferable skills*, transversal skills, *noncognitive skills*, and *soft skills*, among others – are also widely used in reference to the general forms of knowledge and skill associated with 21st century skills (para. 2).

Defining 21st century leadership content knowledge and skills has taken two directions. One approach is based on survey data and often draws from reports issued by global organizations including the World Economic Forum (WEF). In "The Future of Jobs" report (2016[67]; 2018[68]) researchers describe the increasing complexity of the global workplace and present lists of demanded knowledge and skills that are trending and declining. These are collected from interviews and surveys from "Chief Human

Resources Officers, of some of the world's largest employers—by asking them to reflect on the latest employment, skills and human capital investment trends across industries and geographies (World Economic Forum, 2018[68]: p. v)." The premise of this approach is that the content of learning leadership should be survey and research-based which means focusing on skills that are trending and giving less priority to those that are declining. The weakness is that opinions of HR professionals reflect their professional mindset which follows the prevailing linear and competency-based approach to leadership rather than the perspective that nonlinear, volatile, uncertain and complex contextual characteristics change the way leadership must be understood and learned (Starr, 2020a[1]). Table 6 presents the most recent WEF lists[69] which are proposed to be relevant now and will be declining in 2022.

Table 6. Top 10 Trending Skills for 2020 and Declining Skills for 2022

Trending 2020	Declining 2022
• Analytical thinking and innovation • Active learning and learning strategies • Creativity, originality and initiative • Technology design and programming • Critical thinking and analysis • Complex problem-solving • Leadership and social influence • Emotional intelligence • Reasoning, problem-solving and ideation • Systems analysis and evaluation	• Manual dexterity, endurance and precision • Memory, verbal, auditory and spatial abilities • Management of financial, material resources • Technology installation and maintenance • Technology use, monitoring and control • Reading, writing, math and active listening • Management of personnel • Quality control and safety awareness • Coordination and time management

Rather than researching and setting learning content based on best practices and expert lists which continue to change and for which information and knowledge are growing at ever-increasing rates, a second approach takes a broader approach. Holding the premises that the environmental context is complex, what experts believe will occur in the future is nonlinear and may not follow current trends. Furthermore, certain content knowledge, skills or proficiencies may be needed in the future that do not exist in the present, so a better approach toward 21st century leadership content knowledge and skills is to focus on the capacity of *how to learn*. One method of learning how to learn is to be involved in real-world leadership projects rather than abstract and static cases. This is because during active engagement, participants receive direct feedback from clients and peers that can lead to questioning and revising fundamental thinking (Schon, 1983[70]). Another example is by engaging in mentoring and coaching (Brockbank & McGill, 2006[71]) wherein the participant must reflect on their beliefs, values, attitudes and learning

experiences and re-evaluate premises and actions based on understanding interactions with others in changing contexts. Much work on the interaction of content and the processes of experiential learning and reflective practice have been described by Kolb, Schon and colleagues (e.g., Kolb & Fry, 1975[72]; Schon, 1983[69]; Fischler, 2012[73]).

In summary, the systems view of learning leadership content includes characteristics of conceptual knowledge, experiential and practical skills, and experiential and reflective skills of learning how to learn. As noted by Boser (2019[74]),

> There's growing interest in giving students a richer sense of how to gain knowledge. After all, one of the constants of the modern world is dramatic change. That makes the ability to acquire new skills crucial, and the faster someone can learn a new area of expertise, the better they'll do in college -- and their career.
>
> The science of learning is contextual, of course... It looks different in different courses and subject areas … But too many students lack an understanding of the science of learning. To prepare them for the future, our colleges and universities need to do much more to give them the skill of learning to learn (para. 19-20).

Context

In their book, *Learning Leadership* (2016[75]), James Kouzes and Barry Posner pose the fundamental question addressed in this essay: How do people learn leadership? In Chapter 18, *Context Matters,* they offer the following which has direct implications on HEIs and workplaces that offer leadership education:

> It is important to be mindful of the context in which we live and work if we want to grow and develop the leadership competencies. It would be ideal if we could be in an organizational setting that cultivated leadership and provided lots of practice opportunities. Context affects our ability to grow and thrive as a leader-big time. Environments where we find trust and respect are critical, as are opportunities for learning, support for risk and failure, and role models from whom we can learn more about exemplary leadership (p. 81).

From the perspective of the professional workplace, Volini, Schwartz, Roy, Hauptmann, Van Durme, Denny and Bersin (2019[76]) noted that 21st century leadership operates in a new context. Summarizing the results from the *Deloitte 2019 Global Human Capital Trends* survey, they noted that what is needed now and in the future are both new content competencies and "putting them into the new context (characterized by) the changing set of social and organizational expectations for how leaders should act and what outcomes they should aim for." Some of the contextual issues include more complexity and ambiguity, new technologies, the (rapid) pace of change, changing demographics and employee expectations, and changing customer expectations. They argue that searching to find and hire people with new skills sets is a poor strategy because an external person would not fit a new company culture and

context. Instead, new approaches to learning leadership in varying context are required; not by formal education but "learning by doing – and trying."

The fourth essential element in the system of leadership learning transformation process is the learning context which when broadly described can include everything influencing the learning situation. Osborn, Hunt, and Jauch (2002: 797[77]) noted "leadership and its effectiveness, in large part, are dependent upon the context. Change the context and leadership changes." In this perspective, any of the following is an example of context that can influence leadership learning informally or formally: a military or authoritarian culture; general or direct threats of illness and death during a global pandemic; participating virtually/online or face-to-face; and engaging in a leadership experience as the single representative of gender, race, religion, or political perspective. Northoff (2013: 77[78]) noted that "the concept of context … includes different kinds of contexts, social, cultural, mental, and bodily."

Davidoff (2019[79]) argued this broad approach makes the concept too vague because context refers to "All those things in the situation which are relevant to meaning in some sense, but which I haven't identified" (see also, Bate, 2014: 6[80]). Drawing from research on sense-making (Wieck, Sutcliffe & Obstfeld, 2005[81]; Bate, 2014[79]), Davidoff prefers less about any objective structures or functions and more about the subjective "meaning of human environments to the people who live and work in them (and which) are major determinants of the effectiveness and generalizability of interventions to improve outcome (p. 1)." He argues that serious scholars and researchers have had challenges achieving a deep understanding of context, and for leaders, this has produced limited understanding of "fundamental principles of improvement and the actions that put improvements into practice (p. 1)."

Engaging in leadership education in a complex context means volatility, uncertainty and ambiguity are experienced. Trying to learn or perform leadership in such a context can mean there are no reliable or valid predictive relationships: small changes can have large, unanticipated effects, and large stimuli can produce minimal effects. In a complex or chaotic context, cause and effect may only be understood in retrospect – not in advance - and there are no known right answers or experts. For such challenges, Rittel & Webber and later Conklin (2006[82]) described the set of characteristics summarized in Table 6 (see also Starr, 2020a[1], Table 7).

Table 7. Characteristics of Complex (Wicked, Mess) Contexts

1. This kind of problem is difficult or impossible to solve because of incomplete, contradictory, and changing requirements that are often difficult to recognize.
2. There is no definitive formulation of the problem because due to inter-dependencies the problem is not understood until after the formulation of a solution.
3. Solutions are not right or wrong or true-or-false, but better or worse.
4. Solutions are emergent; there are no experts who can solve this type of problem.

5. Every complex, wicked or messy problem is essentially novel and unique.
6. Every solution is a 'one shot operation.'
7. This type of problem has no given alternative solutions.

An example of this kind of learning context exists as HEIs offer leadership education in the 2020 Global Pandemic. While the students, teachers and course objectives may remain unchanged, the context is dramatically complex, volatile, ambiguous and uncertain. On-campus classes suddenly shifted online which required new technology, work space, and time resources; Covid-19 poses a life-and-death threat for face-to-face gatherings which affects classroom activities, direct practice and mentorship; the lockdown of social and business services has frustrated socio-cultural interactions; millions of students, teachers and their families experience dire economic situations due to actual or anticipated job loss; and polarized political parties stain the delivery of effective strategic advice and policies. We rightly continue to read and hear, *no one has ever experienced this kind of situation before*, which is why HEIs struggle to formulate this complex problem and to present a model for delivering education. Hannah, Uhl-Bien, Avolio & Cavarretta (2009: 898[83]) wrote "we believe extreme contexts create particularly unique contingencies, constraints and causations; requiring researchers to view such leadership as inherently contextualized."

Social philosopher Edgar Morin (2008[84]) suggested that the context of learning and of problem-solving consists of an "intimate mixture of order and disorder … a web (com-plexus: what is entangled, interwoven) of events, interactions, feedbacks and co-incidences that determine our visible world (in Vandenbroek (2015: 5[85]). " Despite this integrated perspective, many researchers have argued that a context can be understood by identifying different domains and typologies of complexity. Midgely (2016: para. 1[86]) argues for four complementary domains. He notes there exists,

> **natural world complexity**, or "what is" (where the ideal of inquiry is truth); **social world** complexity, or the complexity of "what ought to be" in relation to actual or potential action (where the ideal of inquiry is rightness); **subjective world complexity**, or the complexity of what any individual (the self or another) is thinking, intending or feeling (where the ideal of inquiry is understanding subjectivity); and **complexity of interactions** between elements of the other domains of complexity in the context of research and intervention practice.

Researchers have also proposed a variety of typologies. Kahane (2004[87]) suggests that context can have *dynamic complexity* which occurs when cause and effect are far apart, hard to grasp from first-hand experience, and so unfolds in unpredictable and unfamiliar ways which leads people involved to see things very differently. Pourdehnad and Starr (2013[88]) noted that *dynamic complexity* is also characterized by increasing rate of change, widespread connectivity, globalization, and innovation. Sudden disruptions such as the novel coronavirus can emerge in this context despite well-formulated planning and without obvious anomalies in key

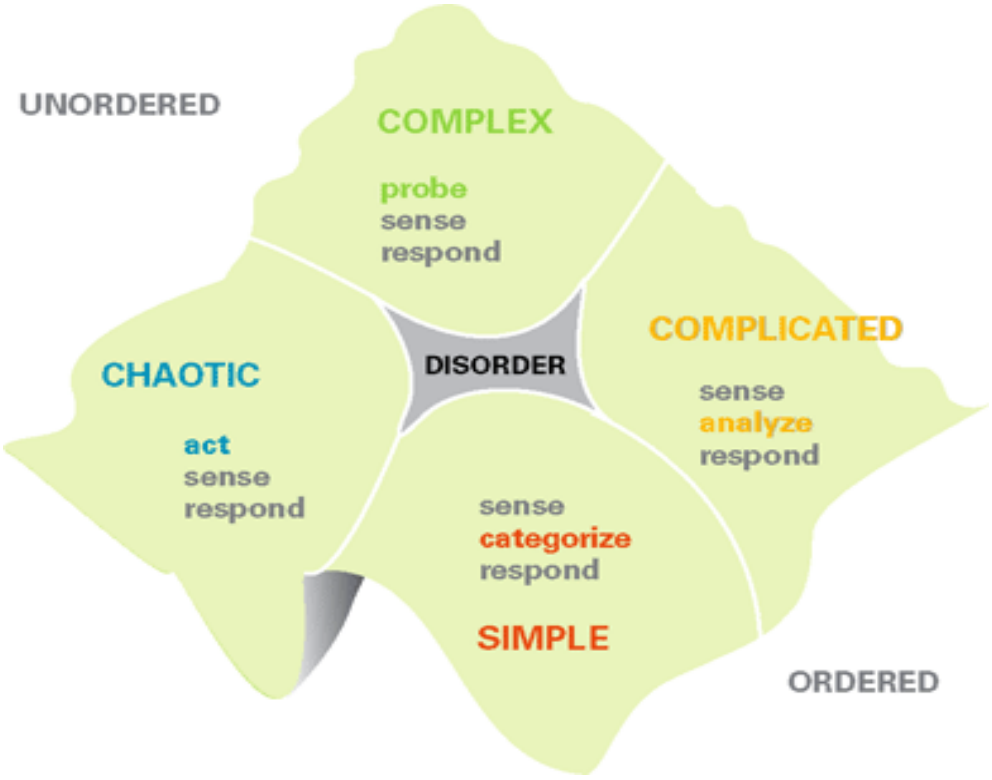
performance indicators. Furthermore, proficiency to learn how to generate novel leadership responses and navigate dynamic complexity is an art, an expression of creative competencies and imagination, based on rapid integration and deployment of a new portfolio of competences and capacities.

Kahane (2004[74]) also argued that *generative complexity* is present when one cannot calculate the solution in advance based on what has worked in the past. This makes the future unfamiliar and undetermined. *Social complexity* can occur when it requires people to collaborate to create and implement a solution which means there must be a process to appreciate and to incorporate diverse perspectives and interests.

Williams (2002[89]) and Geraldi (2008[90]) described c*omplexity of faith* which occurs when a leader is unsure whether the outcome of a problem will work because it requires creating something unique or solving new problems in high uncertainty. *Complexity of fact* is when the leader is presented with a large amount of interdependent information without time to fully analyze and understand it before deciding. Remington and Pollack (2007[91]) suggest *structural complexity* stems from large scale projects (in the engineering, construction, IT and defense sectors) which are typically broken down to small tasks and separate contracts. *Technical complexity* is found in projects which have design characteristics or technical aspects that are unknown or untried. *Directional complexity* exists in change projects when the direction for the project is not understood or agreed upon. *Temporal complexity* results in projects where there is a high level of uncertainty regarding future constraints that could significantly derail the project such as from legislative changes or a rapid change in technology. Remington and Pollock's contextual characteristics seem most appropriate to project-based learning of leadership (Cain & Cocco, 2013[92]).

Snowdon and Boone (2007[93]) presented a context-informed framework (Figure 11) referred to by the Welsh word, *Cynefin*. This integrates most of the typologies of others and posits that a leader's understanding and decision making can be framed into context categories that are structured and ordered or unstructured and unordered. In ordered contexts leadership can be defined, described and explained to students by experts (teachers) who use and refer to good and best practices determined by evidence based scientific methods. Content objectives includes traits, styles, behaviors, situations, and core competencies (see the extended description in Starr (2020a[1]; 2018[94]).

Figure 11. Cynefin Context Framework



When the learning context is unstructured and unordered, it is defined as complex or chaotic. These kinds of problematic contexts are also referred to as *wicked* (Churchman, 1967[95]; Rittel & Webber, 1973[96]) and a *mess* (Ackoff, 1974[97]; 1981[98]). Snowdon and Boone (2007[93]) illustrated the differences as follows:

> It's like the difference between, say, a Ferrari and the Brazilian rainforest. Ferraris are complicated machines, but an expert mechanic can take one apart and reassemble it without changing a thing. The car is static, and the whole is the sum of its parts. The rainforest, on the other hand, is in constant flux—a species becomes extinct, weather patterns change, an agricultural project reroutes a water source—and the whole is far more than the sum of its parts.

There are two elements within the internal context of learning leadership that have impact. One is the theory of learning; the other is the mode or channel of communication.

Theory of Learning: Pedagogy

The historic theory of learning is *pedagogy,* from the Greek words, *peda* (child) and *agogos* (leading or teaching), and literally means the art of teaching children. Yet, as noted by Neck and Corbett (2018:13[99]), "the great master teachers such as Confucius, Aristotle, Plato, and Cicero taught adults and originated the case method, Socratic dialogue, and problem-based learning." Indeed, the global history of teaching and learning within HEIs presents many examples of adult learning. In reviewing the emergence of the modern university in Europe in the Middle Ages, D'Eprio and Pinkowish (2001[100]) recounted,

> Imerius (c. 1055-c. 1125) is thought to have delivered the first lectures on law in 1088, the traditional founding of the University of Bologna, the earliest true university, known as *la Dotta*, ("the Learned") … The first so-called "university" at Bologna was actually a guild formed by (adult) lay students (who as noncitizens lacked legal rights) to protect themselves against abuses of the law and the extortionate prices for food, shelter, and books that were demanded by the townies. By banding together into groups according to nation of origin, the students of Bologna used the power of the purse to strictly regulate the educational process and their teachers' prerogatives, schedules, and diligence. The school was effectively ruled by students, many of whom were already civil or canon lawyers rather than callow undergraduates … Tuition took the form of modest fees students paid directly to professors whose courses they took (pp. 67-68).

Notwithstanding this, in European monastic schools in the 8th century, pedagogy was the recognized theory of learning and corresponded to the processes used by monks to teach simple skills to children. During the 18th and 19th centuries as elementary schools developed and spread in Europe and in North America, pedagogy was incorporated, reinforced, and in the 21st century remains the prevailing theory for teaching and learning from kindergarten through HEIs.

Homes and Abington-Cooper (2000[101]) noted that up to the 1960's, despite some changes in the demographics of those who were learning, the assumption of most educators was that pedagogy was appropriate for children and adults. This was supported by learning research most of which was conducted with students between 6 and 21 years because they were the primary receivers of formal education in the United States. It also supported, as noted by Peterson and Ray (2013: 81[102]), the belief by held by many that "what one learned as a child lasted a lifetime … (and because) there was continued … debate whether or not adults were even able to learn (Merriam, 2001[103])."

The word pedagogy is used to refer broadly to the art, science, or professions of teaching. For example, searching for "pedagogy" within the Thomas Jefferson University web produced *About 537 hits* including from the Center for Faculty Development and Nexus Learning which notes, "The Center's brain trust consists of four experts in online learning, *classroom pedagogy*, instructional design, health professions education, and assessment." This statement was written by the Professor

of Transdisciplinary Studies and Assistant Provost for Faculty Development: Nexus Learning and *Classroom Pedagogy*.[104]

As a theory of learning, traditional pedagogy is ***content based*** which means what is to be learned can be described as a list of topics, subjects, and learning objectives using the language of Bloom's Taxonomy. It is also ***teacher-directed and dependent*** which means it holds an authoritarian leadership premise; namely, that students require external motivation to learn and it is teacher's obligation, i.e., job by contract with the institution and ethical expectation with the student, to present/deliver the course content. The instructor is also responsible in advance of the class to understand instructional goals, and throughout the class to apply learning and motivational activities that engage students in order to meet the preset learning outcomes. The leadership premise of traditional pedagogy is power-and-control-based such that the teacher is the transmitter of knowledge and skills, explicitly sets the agenda, controls the class processes, determines the means of meeting the outcomes (method of evaluation), and determines the degree to which outcomes are met (assigns a grade). Students are recipients of this directed content and process, dependent on teachers for the delivery, and (generally) acceptant of the evaluation measuring their learning. Penaluna and Penaluna (2015[105]) noted,

> many educational establishments consider learning in terms of content delivery, as opposed to learner generated interest and development. They set a curriculum and work to it, ensuring that no content is missed out if at all possible. This is the traditional domain of pedagogy – predetermining what the learning outcomes will be and filling all the perceived gaps on behalf of the learner. This approach … instils a reliance on the system as it does not empower the student to develop their own learning independently (p. 14).

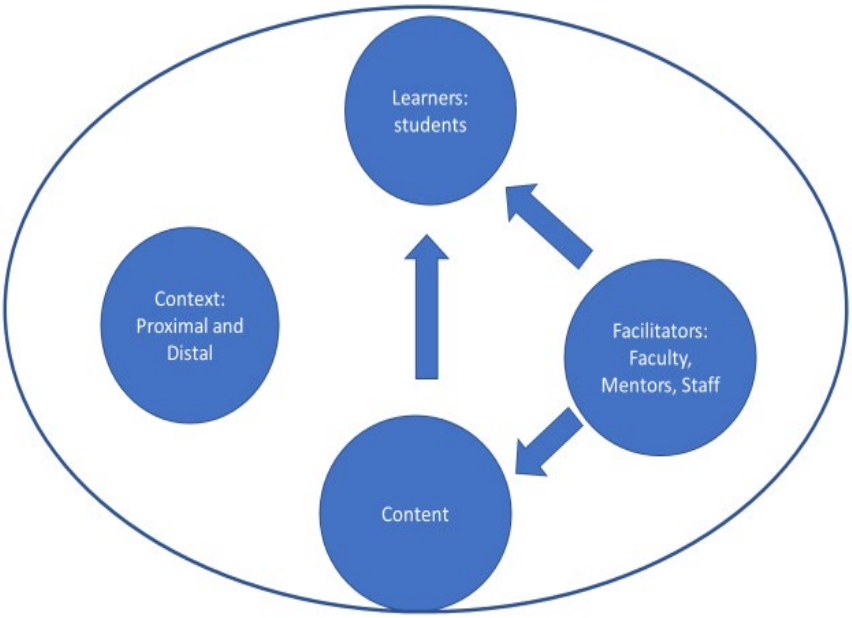
Tannehill (2009:21[106]) referring to Knowles (1989[107]) listed six premises for HEIs that use a traditional pedagogical model for which leadership learning is relevant.

1. Students in a leadership course know that to pass the course they must learn certain content; there is no need to learn what will apply to their lives.
2. To learn leadership, students are dependent on the teacher for defining content and for evaluating if it is learned.
3. A student's leadership experience is a limited resource; instead, leadership learning is built on the content of the leadership class.
4. Students are presumed to be equally ready to learn leadership content in order to earn a passing grade in the course.
5. Leadership is content is subject-centered; learning leadership means a student has acquired the subject-matter content.
6. Students are motivated to learn leadership by extrinsic reinforcement and punishment including grades, teacher approval/disapproval, and (parental/sponsor) pressure.

As depicted in Figure 12, traditional pedagogy focuses on the elements of teacher, student, and content. The relationship is directional, linear, and bounded: the

teacher defines and selects the leadership content and presents this to the student. Examined by formal standardized testing, leadership learning is *presumed* to be the outcome of the linear sum of teacher delivery + content + student. There is little or no attention paid to context nor is there presumed feedback or meaningful interactions that contribute to any teacher learning from the content or from the student, and there is no assumption of coproduced novel emergent learning.

Figure 12. Traditional Pedagogy



Theory of Learning: Andragogy

That the prevailing theory of learning leadership in HEIs is pedagogy and most learning research has focused on learning in children does not mean an absence of adult education. In the United States, early forms of adult education were organized and have been broadly available for more than 200 years to support governing activities. In a report titled, *Federal Adult Education: A Legislative History 1964-2013* (U.S. Department of Education, 2013[108]) the following is noted,

> State histories give evidence of organized adult education in the 18th century. Evening schools for adults, part-time education, citizenship/Americanization classes for the foreign-born, and the Chautauqua experience of 1874 were forerunners of the state/federal adult education movement. In a Council of Chief State School Officers publication in 1969, traces of the development of adult education since 1920 are recorded for many states. California's history project (1995 and 2005) indicates that adult education classes were held in San Francisco in 1856 through the use of state

> public funds, and Massachusetts had continuing education and evening schools as early as 1842 (p. 1).

While in the 19th and 20th centuries, pedagogy was widely accepted, arguments emerged for the notion that a theory (and practice) of adult learning might be separately addressed. In 1833 in Germany, Alexander Kapps described Plato's education theory as adult learning (Davenport & Davenport, 1985[109]) but the ideas had been rejected and fell out of favor. Peterson and Ray (2013[71]) noted that in the 1920s social and educational philosopher Alfred North Whitehead had posited that rapid changes in technology, accelerated social change, and longer lifespans suggested that to adapt and thrive adults required *lifelong learning*. As Dean of the Faculty of Science at University of London then as a professor at Harvard University where he studied the educational model of the Harvard Business School, Whitehead addressed the differences in learning between children and adults. In the introduction to his book, *Aims of Education and Other Essays*, he wrote "Education is the acquisition of the art of the utilisation of knowledge (Whitehead, 1929: 4[110])" which highlighted the importance of applied learning for adults.

In alignment with Whitehead, the idea of a distinctive and separate theory of learning was described by Eduard Lindeman, a social worker and philosopher at Columbia University School of Social Work (Beder & Carrea, 1988[111]). Smith (2020[112]) notes "Lindeman's vision for education was not one bound by classrooms and formal curricula. It involved a concern for the educational possibilities of everyday life; non-vocational ideals; situations, not subjects; and people's experience (para. 11)." In Lindeman's (1926[113]) classis book, *The Meaning of Education*, the opening chapter notes:

> Consequently, all static concepts of education which relegate the learning process to the period of youth are abandoned. The whole of life is learning; therefore, education can have no endings. This new venture is called *adult education* not because it is confined to adults but because adulthood, maturity, defines its limits.

A second learning theory that applies the principles, method and practice of adult teaching and learning referred to in higher education as "non-traditional" students is called ***andragogy*** which is life- and application-centered. Adults are considered to be applied learners such that they need to understand how information presented in a situation – such as but not limited to a leadership course - adds value to their current and anticipated professional activities, and to their current body of knowledge and experiences. An adult theory of learning is important in the 21st century because of the change in student demographics. Caruth (2014: 22[14]) reported that "almost half of today's overall college student body are adult learners, but many facets of higher education are not designed with adult learners in mind."

The premise of andragogy is that an adult learner is ***self-directed***, ***independent***, and ***problem based*** which means the person strives for autonomy and assumes a role of learning responsibility. Andragogy holds different assumptions about learners and instructors than pedagogy and for adults this new framework can "bridge

the leadership theory and practice gap (McCauley, Hammer, & Hinojosa, 2017: 312[114])." Those who adopt the andragogic theory of learning recognize that (working) adults seek to learn about leaders and leadership on their own terms and are more interested in topics relevant to their personal and professional experiences and interests.

In andragogy, the teacher adopts the role of ***facilitator*** and allows the student more autonomy (than pedagogy) by providing less course design structure, although the instructor continues to control the learning process by specifying the learning objectives. In andragogy, rather than using the word student, there can be reference to the ***learner***, defined as one who intends, assumes, and is responsible for learning on his/her own. For a learner, the role of the teacher is to facilitate learning by supporting and assisting but not directing or controlling. Learners seek information to self-develop which is an increase in competency and in quality of understanding. Learners also seek to increase knowledge and understanding across a variety of contexts because their intention is to apply what they learn.

The person most-associated with introducing andragogy into the U.S. education system is Malcolm Knowles who recognized a conflict for many adults between their self-development interests and the premise of pedagogy which was limited to the transmittal of preset knowledge and skills. He noted that adult learners felt this was insufficient and frequently resisted teaching strategies that pedagogy prescribed such as lectures, assigned readings, drills, quizzes, note memorizing, and examinations. In adult education classes using pedagogy, dropout rates were high, and teachers reported that many of the assumptions about the characteristics of learners in the pedagogic model did not fit those of adult students. According to the American Association for Adult and Continuing Education[115] which publishes three adult education journals and offers an annual award in his name, Knowles made "distinguished contributions to theory and practice in the field of adult education from 1935 onward … (and) popularized the theory of andragogy — the art and science of helping adults learn — in the USA and the spread of its influence around the world." Knowles (1970: 7[116]) wrote that andragogy is:

> The process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing learning strategies, and evaluating learning outcomes.

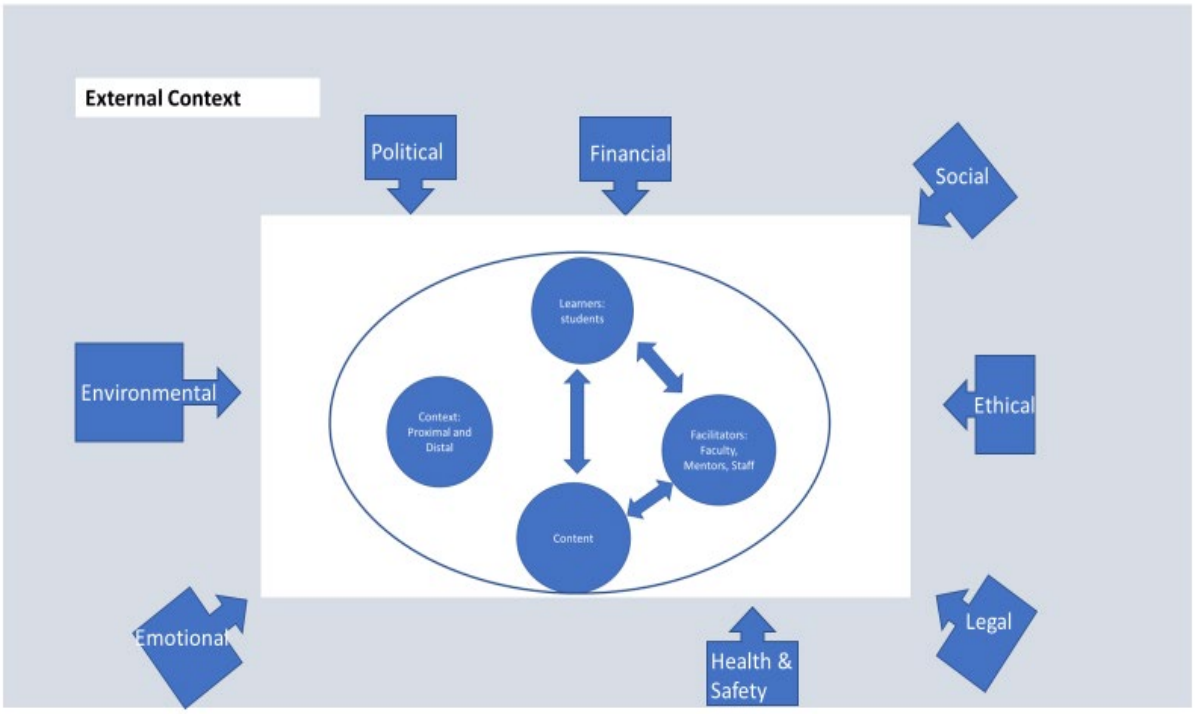
Knowles' conception of adult learning embeds four conditions of learning that support a systems approach to learning leadership. The first concerns *engagement*. Adult students want to be involved in the planning and development of their learning experience; they want to contribute to the topics the instructor presents in a course syllabus; and they want to provide feedback to the teacher that will be accepted and applied. These purposes make dynamic and interdependent the relationships between learner, teacher and content.

The second is *experience*. Adult students want to bring relevant current and past experiences, positive and negative, into new learning. These leadership observations and actions add to and are foundations for new leadership understanding. Recognizing and discussing leadership mistakes, for example, supports self-development because these motivate adult learners to seek new ways to address challenges that avoid negative outcomes to themselves and others.

The third is *relevance*. As earlier described by Whitehead (1929[98]), adult learning concerns the art of the application of knowledge. This links each student to content and context because when leadership competencies are perceived to be useful in a current or anticipated role or career, they increase in learning value. These also link with the teacher because learning objectives can be personalized via cases or anecdotes if the teacher understands the characteristics of the students.

The fourth condition of learning is *problem centered*. This refers to the notion that adults are self-directed to find answers so seek learning when presented with leadership challenges, i.e., problems and opportunities. While learning to pass a teacher's test of content is a characteristic of pedagogy, in andragogy, learners seek to be tested about the challenges of their obligations and professional work where understanding leadership problem solving processes is essential. Figure 13 shows a system view of learning leadership via andragogy.

Figure 13. Andragogy as a System of Learning Leadership



As depicted, the *premise* is that the elements of student, teacher and content are interdependent. Context characteristics from the containing system - particularly experiences and problems from the student's working environment – also inform learning. Proximal context, however, defined as characteristics within the classroom including the mode or channel of communication are rarely part of this theory of learning. As described by Merriam (2010: para. 1[117]), "Andragogy … focuses on the individual learner … (and) … has been critiqued for not recognizing how the context where this learning occurs also shapes the learning. Attention to context became prominent in the later decades of the twentieth century and remains central to understanding adult learning today."

Theory of Learning: Heutagogy

Traditional pedagogy applied to learning leadership assumes a teacher-dependent and content-focused perspective. The teacher sets content objectives, i.e., what the student needs to learn about leadership, controls the teaching processes, i.e., how to deliver the content to the student, and assumes that if assessments are properly carried out, the student will learn leadership. Andragogy acknowledges the interdependent relationships among student, teacher and content, particularly that it is important for the student to decide how the learning objectives set by the teacher are used. Both learning theories recognize that the content of modern leadership has been influenced by the broad descriptions and examples of 21st century skills – often set as competencies - so the learning objectives presented in a current HEI leadership course are selected from lists of these. Both theories ignore or treat lightly the influence of context particularly when informed by radical changes in technology described by Agonács and Matos (2019: 223[118]):

> The emergence of digital technology and the web 2.0 in education, training and learning has raised issues around which pedagogies best suit the twenty-first-century learning context. This is a context where the constantly changing work-place requires fast learners; where knowledge and skill acquisition has become increasingly the responsibility of the individual; where learning happens ubiquitously and non-linearly; where the Internet is a primary source of information; where an excess of information is at one's disposal in a second; where most of the learning occurs through knowledge sharing; and where the role of the teacher or trainer has radically changed.

Gerstein (2014[119]) suggests an analogy between the development and evolution from Web 1.0 to 2.0 and now to 3.0, and what she describes as Education 1.0, 2.0 and 3.0. She writes that "many educators are doing Education 1.0 and talking about doing Education 2.0, when they should be planning and implementing Education 3.0 (p. 84)." Keats and Schmidt (2007[120]) earlier had described the mostly one-way nature of the first generation of the internet and of the prevailing theory of learning, i.e., Web 1.0 and Education 1.0. For both, information is presented to the intended consumers via authorized sources, but "rarely do the results of those activities contribute back

to the information resources that students consume in carrying them out (Keats & Schmidt, 2007, para. 6)."

Gerstein also noted that Web 2.0 has enabled social networks, social media, synchronous and asynchronous interactions between users, and interactions between users and multiple categories of content. If planning a vacation, for example, one can go online to connect to a rental website which presents multiple listings each with exterior and interior images of desired properties and links to *Google Maps* that show the street location and directions to reach the property. Education 2.0 is similar in that there are multiple interactions between learner and facilitator, between learners, between facilitators, and between content and content experts. Web 2.0 and Education 2.0 enable interactions through use of blogs, podcasts, social bookmarking, and related collaboration technologies, although feedback loops remain absent because "the process of education itself is not transformed significantly although the groundwork for broader transformation is being laid down (Keats & Schmidt, 2007, para. 7)."

Markoff (2006[121]) described a move away from the powerful commercial interests influencing consumer choices in Web 2.0 and the emergence of Web 3.0 which is composed of interactive and networked content that is freely and readily available. This is personalized such that it is based on individual interests in order to provide users with richer and more relevant experiences. Using the travel example, he noted that Web 3.0 enables

> searching for a hotel which "understands" concepts like room temperature, bed comfort and hotel price, and can distinguish between concepts like "great," "almost great" and "mostly O.K." to provide useful direct answers. Whereas today's travel recommendation sites force people to weed through long lists of comments and observations left by others, the Web. 3.0 system would weigh and rank all of the comments and find, by cognitive deduction, just the right hotel for a particular user (para. 10).

The emergence of Education 3.0 has a similar understanding; it is personalized, self-determined, and interest based. Learning is not driven by what a course or program designer or facilitator decides; rather by an individual's problem-solving, innovation, and creativity. In this 3rd generation of learning, the learners themselves contribute to what must be understood and shared, and the learners must build and develop methods and tools such as social networking that they apply in learning and practicing leadership. The idea of creating and using a social network as a leadership learning and problem solving tool derives from the writing of W. Ross Ashby, the third president of the Society for General Systems Research, the original academic community of systems thinking founded by Ludwig von Bertalanffy and others at the Center for Advanced Study in the Behavioral Sciences in 1954. As explained by Komlos and Benjamin (2019: para. 4[122]):

> His (Ashby's) Law of Requisite Variety states "Only variety can destroy variety," which means that leaders who are faced with a multidimensional challenge must be as

> multidimensional as the challenge. That's only possible by tapping into a much broader and deeper variety of people — beyond the usual suspects — who have the combined knowledge, experience and expertise to match the complexity, and whose buy-in is essential for execution. Short-changing requisite variety guarantees partial outcomes; starting with a partial understanding, followed by partial solutions, followed by weak execution.

Gerstein (2014) refers to Education 1.0 as pedagogy, Education 2.0 as andragogy and Education 3.0 as heutagogy, a learning theory described only 20 years ago and increasing in its development and range of applications. This theory of self-determined learning was introduced by Stewart Hase and Chris Kenyon as an extension to andragogy. In their first publication (Hase & Kenyon, 2000123) they argued that the 21st century learner must become responsible not only for how to learn but also for what to learn. While in andragogy, a learner may demonstrate self-direction by deciding how to learn the present content objectives in a leadership course, in heutagogy the curriculum itself can be decided by the learner. The self-determined aspect of this theory is grounded in neuroscience which has describes that people are hardwired to learn and use "exploration, hypothesis testing, all senses, experience, mimicry, reflection, context, and memory (Agonács & Matos, 2019: 224108)." Indeed, metacognitive processes, i.e., thinking about what we are thinking, have been shown to play a role in learning (e.g., Dunlosky & Metcalf, 2009124; Fleming et al, 2010125; Fleming & Dolan, 2012126). Specifically, there is evidence that reflection and meditation have been shown to improve memory and self-awareness. Heutagogy, consequently, places the learner in the center of the teaching and learning process such that he/she is an active agent in the whole learning experience from planning and executing to assessment of what has been learned (Hase & Kenyon, 2013127). Active agency and 21st century proficiencies are what emerging leaders must gain and acting leaders must demonstrate.

The active and autonomous requirement of the learner in heutagogy challenges pedagogy and andragogy which require the instructor to provide content and set learning objectives and changes the learner into a **colleague of the instructor**. That the learner is active means that the learner questions and decides *if the topic itself* is being formulated properly, *if a different mindset* is required to understand the complicated or complex characteristics of a topic, and *if the content, methodologies or tools provided* are appropriate to solve or dissolve the problem. This self-determined reflection which is central to heutagogy is based on double-loop learning a concept first described by Argyris (1976[128]). In single-loop learning, which is characteristic of pedagogy and andragogy, the person tries to solve a problem by learning and applying more or new content knowledge and skills but without changing or questioning the method, approach, or goals. In double-loop learning, the person shifts to asking questions about their fundamental model, from concepts that are static and analytic to dynamic and systemic, and from a focus on the framed current situation to a focus on the broader considerations of the context and systems influences (Figure 11). In his classic example Argyris (1991: 99[129]) describes the shift from a mechanical to a social framework:

> A thermostat that automatically turns on the heat whenever the temperature in a room drops below 68°F is a good example of single-loop learning. A thermostat that could ask, "why am I set to 68°F?" and then explores whether or not some other temperature might more economically achieve the goal of heating the room would be engaged in double-loop learning.

The learner in heutagogy is ***self-determined***, ***interdependent***, and ***practice based***, and as a matter of personal and professional development identifies emergent and context-based opportunities and requirements to learn. Heutagogy is active and participatory, driven by learners who are engaged in discovery and reflection, creation of new content/information, and personal decisions about the degree to which they need collaboration with facilitators, mentors and peers. This form of learning occurs in a non-linear manner, giving the learner full agency and following a self-defined learning path not designated by an instructor. As noted by Eichler and Dietz (2014: 155[130]):

> Heutagogical learning extends the goal-setting in andragogy by calling on the learner to not only evaluate their progress on (self-defined) goals, but to evaluate the goal-setting process itself and revisit their goals for revision throughout the process … Goals in questions may come from additional information or a better understanding of the complex systems and rule sets underlying a complex problem. Further, problems change over time, particularly complex social problems.

Some scholars consider that all human learning develops along a *PAH continuum* from pedagogy to andragogy to heutagogy (Canning, 2010[131]; Knowles, 1975[9]), and that teachers should adhere to a premise of matching the (higher) learning approach to the (greater) level of maturity and self-organization of the learner (Luckin, Clark, Garnett, Whitworth, Akass, & Cook, 2010[132]; Garnett, 2013[133]). The implication is that as learners become less dependent upon the instructor for guidance and structure within the learning process (pedagogy), they advance to more responsible and less structured learning contexts and environments (andragogy) then develop self-selected, autonomous, and self-directed goals and learning objectives (heutagogy) for which the learner decides if an instructor is necessary and what value the person offers.

In contrast to the *PAH continuum* premise are researchers including Ackoff and Greenberg (2008[6]) who argue the ability to be a self-determined learner is innate to humans so exists at a very young age. Hase & Kenyon (2013: 9[110]) accept this belief and noted, for example, that, "…young children are very capable learners. But as we get older our education system seems to suppress our wish to ask questions, by telling us what we need to know." That there is a basic human ability to be self-determined in learning is well aligned with the educational approach used, for example, by the Montessori schools (Lillard & Else-Quest, 2006[134]). A hybrid perspective about how learning develops is proffered by Blaschke (2016) who wrote, "both viewpoints are valid, but there may be those learners who must relearn self-directedness in their learning approach in order to advance to a state where they can practice self-

determined learning (p. 8[135]).” Blashke (2012[136]) presented a summary of the differences with andragogy (Table 8).

Table 8. Heutagogy Compared to Andragogy

Heutagogy…
● requires double-loop learning rather than single-loop learning ● emphasizes capability development, not only competency development ● is learner-determined (the learner designs the curriculum and makes the assessment) rather than learner-directed by the instructor ● is a learner-managed approach in contrast with instructor–learner managed ● has a non-linear design and learning approach instead of a linear approach ● focuses on the process of how to understand how to learn as opposed to getting students to learn content

Notwithstanding the argument that self-determined learning is innate, heutagogy is important for more developmentally mature people; those who evaluate learning more systemically and with more consideration of context. This extends the process into the realm of emergent capabilities-based learning rather than pre-defined competencies-based (andragogy) or pre-defined content objectives-based (pedagogy). This means that heutagogy is an important theory of learning for doctoral-level leadership programs that have a requirement for a thesis/dissertation and for a leader who wants to write (and have published) a scholarly paper. Writing a dissertation and scholarly paper require defining for oneself a topic of interest then searching for ways to understand and to contribute new knowledge and new understanding. This kind of endeavor requires the learner to shift from pedagogy: copying others; to andragogy: bringing one’s ideas into the content; to heutagogy: questioning fundamental premises and beliefs which lead to exploration which can lead to creating novelty or innovation. Enabling this transition suggests that education programs must develop a process to shift their theory of learning for their students/learners as the dissertation approaches. For teachers this means less directing and setting content and more facilitating support and encouraging the learner to assume responsibility for learning. This is colloquially described as moving from the *sage on the stage to the guide on the side*. To enable the transition to heutagogy, Blaschke (2014[137]) suggested that a 21st century education program should incorporate the following processes which are adapted here to learning leadership in context.

1. Let learners choose what they will learn and how they will learn it

If an HEI wants leadership learners to become self-determined, whether aimed at writing a dissertation or for professional practice, there must be a process for learners to choose leadership topics and opportunities in differing contexts to learn about that topic. Facilitating self-determination, i.e., learning autonomy, is not a trivial consideration. One way to do this is with incorporating real-world problems

rather than cases or by encouraging learning to engage in independent studies that connect to proposed dissertation topics. These should be relevant to the learners' leadership challenges and should include defined processes that can be applied to their personal and/or professional context. Referring to the professional workplace, Pink (2011[138]) noted that when people have the autonomy to make choices, they will be more motivated to learn – which also applies in the learning environment. Deci & Flaste (1999[139]) wrote, "When autonomous, people are fully willing to do what they are doing, and they embrace the activity with a sense of interest and commitment" (p. 2).

2. Help learners to explore, discover and apply

To develop experience exploring and synthesizing information and knowledge into understanding (Gharajedaghi & Ackoff, 1984[52]), leadership students in heutagogy should be asked to learn about a specific topic that interests them but about which they are not familiar. This can be related to course content but not directly addressed by the instructor. It should incorporate contextual issues, and the results should be shared with the class in order to gain feedback. For example, if a course studies authentic leadership, students may be invited to discover how the literature and practice of positive psychology addresses authentic leadership and to link this to leadership in the context of the global COVID-19 pandemic. Exploration and discovery build the capacities for self-determined learning and the adaptive capacity for leadership in complex organizations (Uhl-Bien, Marion & McKelvey, 2007[140]).

3. Be a guide on the side

In heutagogy, the focus of learning shifts from the teacher to the learner which blurs the traditional roles but supports the facilitation of student self-determination. This is often unknown territory that produces anxiety in teachers and students because it removes the comfortable boundaries and power structure of a traditional classroom environment. Shifting from course director to facilitator or guide requires that the teacher provide guidance as students navigate and explore. Braddell (2017[141]) suggests this is a form of facilitative non-directive coaching. He noted "It is based on reflective learning and structured problem solving. The coach/facilitator requires knowledge only of how to help people learn and problem-solve for themselves (p.6)."

While content knowledge may be helpful, the primary role of the guide is to enable leadership learners to develop mental models and skills that adapt and change when the context changes and to not be afraid to ask for help when they encounter problems. This approach is designed to encourage leadership learners to take as much responsibility as possible for their own learning but also as previously noted by Komlos and Benjamin (2019[112]) to develop and use networks for additional guidance from those who have the combined knowledge, experience and expertise to match the complexity of the problems confronting leaders in the 21st century.

4. Let go – allow learners to learn from each other

Perhaps the most difficult requirement of heutagogy is for the teacher to relinquish control of the traditional classroom and its traditional elements - preset course objectives, timelines, deliverables - and to let learners roam free on their learning path (Dillon, 2014[142]) but still demonstrate effective learning and other performance requirements. As the context of leadership in the 21st century is volatile, uncertain, complex, ambiguous, non-linear, and unpredictable, leadership teachers must allow learners to navigate. Leadership students must learn to assess the context, determine what mindset to adopt for understanding, select methods and tools of intervention and produce outcomes for which they are personally responsible. One way to learn to do this is by establishing self-determined learning teams or pods where students formulate problem statements, discover and research answers, and teach each other. This can be extended by subsequently requiring students to teach and enable learning by colleagues in different pods. It can also be done by encouraging independent study courses wherein a student/learner must define the topic, content learning objectives, methods of investigation, methods of evaluation then allow colleagues and peers to provide feedback.

5. Help learners understand the process of how to learn

From a system perspective, learning (leadership) does not result merely from meeting a list of content objectives; rather, it is an emergent property of an education system composed of students, teachers, content and context which are interdependent and interactive. Learners of leadership need to understand that there are three elements of these interactions: the role of understanding conceptual knowledge, i.e., via leadership theories and models; performing experiential skills and processes, i.e., via real world projects in different contexts; and reflective learning, i.e., reviewing, questioning and appreciating the meanings synthesized from the conceptual and experiential experiences. Reflective skills are critical for leadership development and for double loop learning.

Andersen (2016[143]) suggests those who are most effective at learning how to learn possess four attributes: "aspiration, self-awareness, curiosity, and vulnerability. They truly want to understand and master new skills; they see themselves very clearly; they constantly think of and ask good questions; and they tolerate their own mistakes as they move up the learning curve (para. 3)." One approach to facilitate reflection about learning that is common in MBA programs but less so in leadership programs, is to have professional coaches and mentors who work formally and informally with students. The processes applied can help students to review what they learn that they perceive to be important, to appreciate how this learning is accomplished, and what it means to their self-determined leadership development. Blaschke (2014) describes use of a tool, a reflective learning journal. This is usually a digital document where students hold their best written work. She wrote,

> I "feed" to the students, certain questions for reflection, which they respond to within their learning journals. These questions are not only related to course content and

> how this content has influenced student thinking but are also structured to help learners think about their learning process: how they best learn both in a team and individually (p. 60).

Hase (2014: 103[144]) suggested that a learner engaged in heutagogy was more effective when a set of proficiencies was developed (Table 9). His focus for these *proficiencies, attributes, and skills* was not specifically on 21st century skills, but rather on the 21st century context; the learning environment necessary to support and develop leadership.

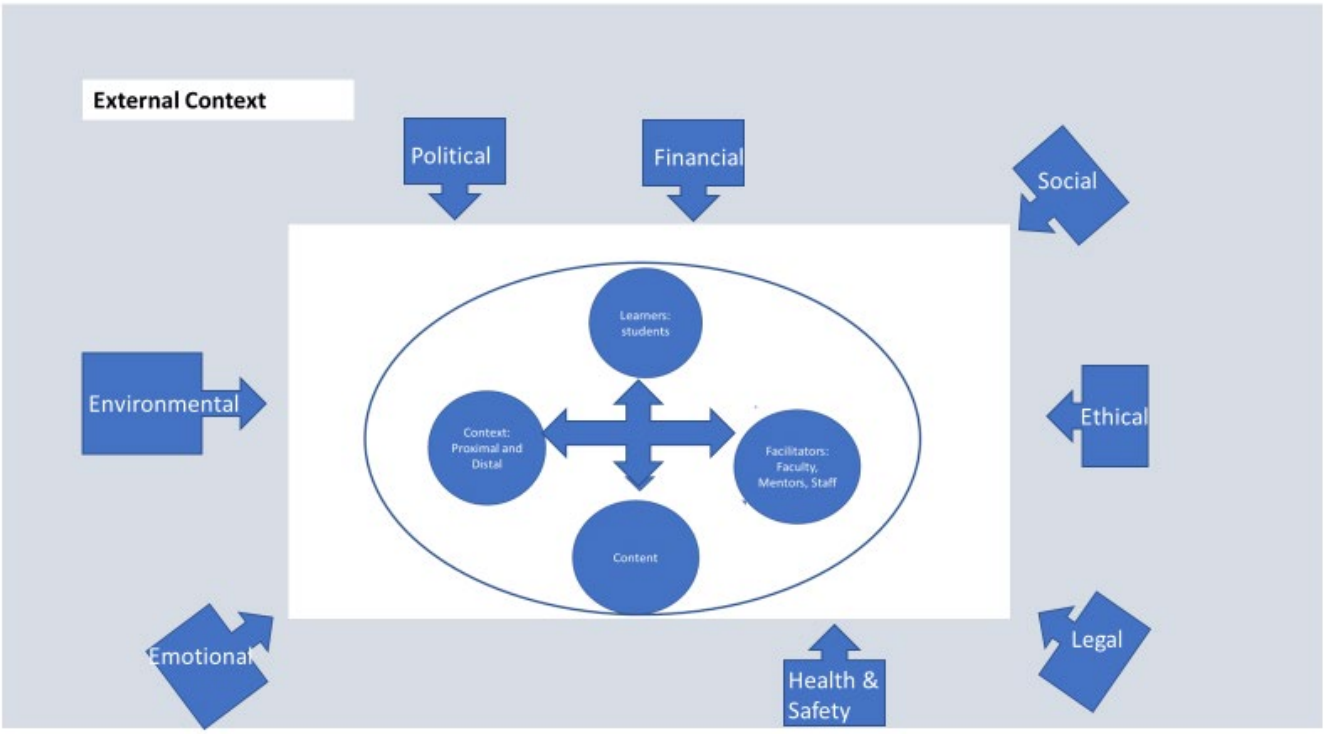
Table 9. Heutagogy Learner Framework

Proficiency Capacity to accept and manage ambiguity	**Attributes** Low need for control Openness to experience Moderate on perfectionism scale High stability and low anxiety Capability	**Skills** Project management Ability to use social media *Some of "The Big 5 Personality Traits"
Proficiency Ability to foster engagement	**Attributes** Empathy Optimism Flexibility to change approaches as circumstances change	**Skills** Interpersonal effectiveness Ability to self-regulate Understanding of how to motivate others Ability to foster a shared purpose and vision Maintaining direction Fostering the joy and rewards of learning
Proficiency Capacity to learn	**Attributes** Willingness to change own ideas and beliefs	**Skills** Ability to research and learn Being thoroughly on top of one's subject areas Having wide and accessible networks Ability to share openly with others Knowledge management skills Ability to foster collaborative learning Ability to apply learning and knowledge (practical skills)
Proficiency Ability to use open systems thinking	**Attributes** Willingness to empower others	**Skills** Capacity to frequently scan the external environment and respond to changes Ability to foster participative democracy/collaboration decision making and process Capacity to work in a team as both leader and as a member

		Ongoing internal and external analysis of effectiveness (continuous improvement) Ability to filter information (research skills)

Figure 14 presents a systems-view of learning leadership via heutagogy. The *premise* is that the elements of student, teacher, content and context are interdependent. External context characteristics and experiences and internal contextual forces inform learning. In the following sections, the details of the internal context are presented.

Figure 14. Heutagogical approach to learning leadership



Channels of Communication: Face-to face, virtual/online and hybrid/blended

The channel or medium in which education occurs is a characteristic of the context that, historically, has been a face-to-face (f2f) experience characterized as having the student and instructor together in the same physical space. F2f education can be effective when the contextual environment includes a well-structured and organized physical design of the classroom (Barrett, Davies, Zhang & Barrett,

2016145), supportive buildings, laboratories and equipment infrastructure (Teixeira, Amoroso & Gresham, 2017146), and social resources devoted to student learning.

With the development, proliferation, and access of computers and computer-based communication, approximately 90% of Americans use online resources for a wide range of everyday activities (Pew Research Center, 2019[147]). This is also the context for HEI leadership learning and where business is conducted; both have adopted a full or *blended or hybrid* mode that uses f2f and *virtual* media. Indeed, for those who must collaborate when separated by geographic distance, technology-mediated *virtual* communication has become essential. While most virtual technology has not been designed specifically to meet student learning objectives, the value and opportunity of this medium to education have been increasing. However, sudden shifts to a new context lead to complexity as became obvious on April 9, 2020 when due to the impact of the COVID-19 pandemic, Governor Wolf of Pennsylvania mandated,[148]

> All Colleges and Universities may not resume in-person instruction or re-open their physical locations until the Governor permits them to open or lifts the closure of non-life-sustaining businesses…Teaching and learning may continue; schools are strongly encouraged to provide continuity of education for all students in the most appropriate and accessible ways possible.

This declaration (issued in similar form by other US Governors) created a dynamically complex new situation: a policy was for *emergency remote teaching* due to risks of f2f infection. For many faculty and working professional adult students in HEIs, this meant an immediate shift from a traditional classroom to a form of interactive videoconferencing using computer software such as from Zoom Video Communications, Inc. (Zoom, https://zoom.us/). As suggested by Hodges, Moore, Lockee, Trust and Bond (2020[149]), "Well-planned online learning experiences are meaningfully different from courses offered online in response to a crisis or disaster … (and) the speed with which this move to online instruction (occurred) is unprecedented and staggering (Para. 1)."

From a systems perspective, the channel should not be the driver of learning because while it is necessary, there are several interdependent elements that influence its effectiveness. The channel should be understood as part of the learning context and the design of the leadership learning system should address how the relationships between students, teachers, content and this aspect of context may be aligned to support learning. Furthermore, as an interdependent component of the context, there are other elements that are also important. One is coaching, consulting and advising for students (and instructors) which support both communication and reflection for students and instructors. The other is information technology because use of computer technology for virtual communication requires devoted support to ensure the instructor and students can focus on learning rather than troubleshooting mechanical failures.

Means, Bakia and Murphy (2014150) suggested that efforts to engage in learning within the virtual medium is a complex endeavor that requires formal planning – typically from six to nine months for a single HEI course (Hodges, Moore, Lockee, Trust & Bond, 2020149) - in order to address at least nine critical characteristics or dimensions: modality, pacing, student-instructor ratio, pedagogy, instructor role, student role, communication synchrony, role of assessment, and source of feedback. While presented as separate items (Table 9), careful planning for online learning includes not just identifying the content learning outcomes and objectives, how to address the characteristics of the nine content dimensions, but also how to support different types of interactions between these dimensions that are important to the learning process. Moreover, the immediate context modality may interact with the broader influencing forces which includes a requirement to "assess needs, problems, assets, and opportunities, as well as relevant contextual conditions and dynamics (Stufflebeam & Zhang, 2017151)." Operating in the virtual context requires one to recognize that learning is a social and a cognitive process, and like f2f, is not merely a matter of information transmission.

Table 9. Dimensions of Virtual Curricula and Content

Modality	Fully online Blended/Hybrid: >50% online; 25-50% online; videoconference
Pacing	Self-paced: open entry; open exit Class-paced Blended: some open, some class-based
Student-instructor ratio	<35:1 36-99: 1 100-999: 1 >1000: 1
Pedagogy	Expository Practice Exploratory Collaborative
Assessment Purposes	Student ready for new content Student requires support Student at risk of failure Teacher requires student's learning state Teacher requires criteria for a grade
Instructor's Role	Active instruction Minor support None
Student's Role	Observe, listen, read; no interaction Respond to questions by instructor or students Explore, simulations, interact with resources Collaborate with others
Communication Synchrony	Asynchronous Synchronous Blend of asynchronous and synchronous

Feedback	Automated Teacher Peers

Selecting Leadership Content

The content of leadership learning is the *curriculum*, i.e., the set of courses, topics, and learning objectives in a degree or certificate program. As the content is not well-organized and the academic literature is enormous and continues to grow, three approaches to selecting content are suggested: survey research, design, and metaphor.

Survey Research

One of the input variables proposed for the system of learning leadership (Figure 2) is mindset. When the mindset associated with learning leadership is scientific and analytic then it is presumed appropriate to use evidence-based research methods to make decisions and solve problems. Pfeffer and Sutton (2006[152]) argued that if evidence-based research was more frequently used, organizational leaders could practice more effectively. However, the context in everyday organizations is often, volatile, uncertain, complex and ambiguous even to experienced leaders, and wanting evidence-based practices does not mean that it is available, that research has identified how leaders effectively function in differing situations. As noted by Stetler, Ritchie, Rycroft-Malone and Charns (2014[153]), "Making evidence-based practice (EBP) a reality throughout an organization is a challenging goal (because) little is known about the exact role and function of various levels of leadership in the successful institutionalization of EBP within an organization (p. 219)."

Nevertheless, as the goal for HEIs is to attract students who will complete a curriculum, the implication of holding a science mindset is that courses and topics should be selected based on valid and reliable evidence. One common research method is by selecting content used by peer leadership education programs. This involves conducting surveys of competitive HEIs and interviewing subject-matter experts who teach HEI leadership courses. The results identify curricula that are available across institutions such as, for an undergraduate program, *theories and models of leadership* and *leadership and decision making*.

A related method applies to selecting content for a theme such as 21st century leadership skills. The method would be to select topics from a report such as "Leadership for the 21st Century" by Deloitte Consulting (Volini, et al, 2019[75]) which lists *leading through complexity and ambiguity* and *leading in new contexts* as most important to CEOs and C-suite executives. Another example would be to draw from "The Future of Jobs" report issued by the World Economic Forum (2018[67]) which lists knowledge and skills that are trending and declining according to opinions collected from surveys of Chief Human Resources Officers in global organizations. Among the 10

trending skills for 2020, for example, are *creativity, originality and initiative*; *complex problem solving*; and *reasoning, problem-solving and ideation* and among the 10 declining skills for 2022 are *management of financial, material resources*; *management of personnel*; and *technology use, monitoring and control*. To create a course, leadership skills that are trending would be preferred over those that are declining because they are perceived to reflect evidence based on research.[154]

This analytic approach is consistent with Snowdon and Boone's (2008[93]) decision making framework for a complicated problem defined as one that is reasonably well-structured so it is in the domain of expertise and can be solved by good or best practices. However, this approach is threatened by the representativeness heuristic, a cognitive error described by Kahneman and Tversky (1972[155]). Relying on a simple rule such as it is appropriate to select leadership topics because they are "offered in similar programs" or because "Chief HR officers believe are trending" may be biased.

Another challenge to this method of selecting the name of course or a topic is determining learning outcomes and learning objectives, i.e., statements of what should one learn; operationalized as what one should know and demonstrate by completing the course or program. This is not a trivial task because even when objectives and outcomes are listed, their measurement is difficult and often does not indicate effective learning. For HEIs, Bloom's Taxonomy of Educational Objectives (Anderson & Krathwohl, 2001[47]) are the basis of these learning outcomes. As there may be confusion between learning objectives and learning outcomes, the website of the University of Toronto Centre for Teaching Support and Innovation (2020: para. 5[156]) suggests the following perspective:

> Learning objectives, for example, may outline the material the instructor intends to cover or the disciplinary questions the class will address. By contrast, learning outcomes should focus on what the student should know and realistically be able to do by the end of an assignment, activity, class, or course. The same goals addressed by learning objectives can be equally addressed by learning outcomes, but by focusing on the application and integration of the course content from the perspective of the student, learning outcomes can more explicitly and directly address expectations for student learning.

While criteria for learning may be identified, the challenge posed by Agonács and Matos (2019: 223[108]) is that adult learning emerges from the interaction of elements rather than as a result of selecting clearly defined content. They noted the context of leadership learning and practice is "constantly changing (so) requires fast learners; where knowledge and skill acquisition has become increasingly the responsibility of the individual; where most of the learning occurs through knowledge sharing; and where the role of the teacher or trainer has radically changed." For this reason, an alternative method is relevant.

Design

When the input mindset for learning leadership is systemic then acquiring content for learning leadership applies systems thinking and design methodologies. While design methods can be carried out without systems thinking, when a systems framework is used, outcomes are improved (Pourdehnad, Wexler & Wilson, 2011[157]). A systems-informed approach does not make choices based on what is available in similar programs; rather, it applies a rigorous methodology to engage stakeholders to define and design their desired content.

One example is of this methodology is idealized design, a process that emerged at Bell Laboratories approximately 70 years ago and has been applied globally for organizational and educational systems challenges (Ackoff, Magidson & Addison, 2006[158]; Jackson, 2019[159]). Idealized design was used to select the content for 20 leadership courses in the programs of Strategic Leadership and of Complex Systems Leadership at Thomas Jefferson University. Starr (2015: para. 5[160]) describes part of the process:

> More than 100 people participated: academic leaders (e.g., deans of schools, directors, chairs of departments and programs, faculty members from the university and from other universities); leaders and members of administrative functions (e.g., registrar, finance, library, development, and other roles from several universities); alumni of graduate degree programs; current graduate students (Master and Doctoral) from several universities; leaders and thought leaders from professional organizations and leadership societies; executive level leaders from corporate in-house universities and training departments; government and nonprofit training leaders; senior HR administrators; and representatives from organizations where there was no support for graduate education.
>
> In workshops and meetings held in the physical context of a university campus, participants were challenged to generate characteristics of an ideal leadership program that "you would personally want to teach in; you would want to administer via your professional work; you would want to be a doctoral student in; you would recommend colleagues apply to; your organization would support if colleagues were admitted as doctoral students, faculty or mentors; you would want to join for professional and community support; your organization would want to partner with for consulting and research projects; and you would want to be acknowledged as a co-designer." These were not specifications for the future or for others; rather, these were what the stakeholders and users wanted right now and for themselves. The only limitations were that elements must be technological feasible and that the program must be capable of thriving in the existing environment, as well as be sustainable in the future as the environment may change.
>
> As a guide, the following topics were available: Vision and mission; Admission (student demographics, requirements, pathways); Staffing (faculty demographics, requirements, pathways); Channels and learning environments (locations, travel, virtual); Brand ("type" of degree, "kind" of program, PR/marketing); Size/time (students/faculty, timelines, FT/PT, weekend); Curriculum/courses (content objectives, topics, obligations, opportunities); Learning experiences (to develop

capacities, competencies, connections or integrations); Deliverables (academic and practice); Finances/tuition (including support mechanisms); and Relationships (university and workplaces).

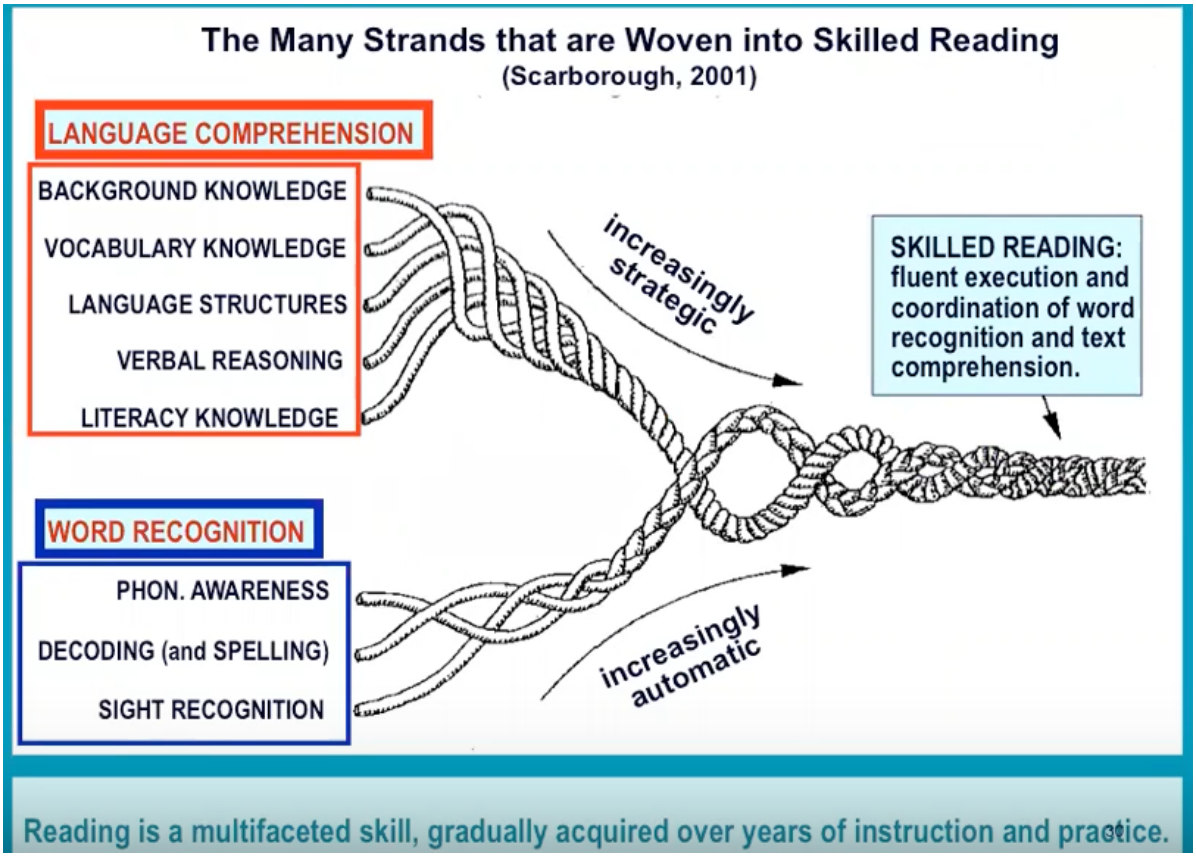
The methodology collects the properties for the content of an ideal leadership learning program based on direct contributions and choices by stakeholders; the facilitators are not content experts (Ciccantelli & Magidson, 1993[161]). The outcomes differ from other design methodologies: "First generation" approaches are based on selecting content from experts (e.g., academics within HEIs and HR professionals) who design or describe content *for users*; "second generation" approaches are drawn from experts who are informed by others resulting in content that is designed or described *with users*; "third generation" approaches such as idealized design bring together stakeholders and those with the requisite mindset (Ashby, 1961[162]) to create leadership content that is designed and described *by users* (Barabba, 2011[163]). This methodology established the content of all courses in the Jefferson leadership doctoral programs. It also developed the design for the program business model; approach to acquire projects and establish relationships with external organizations; qualifications and diversity of the faculty, mentors and coaches to support learning experiences; administrative and advising policies to support learning for students and faculty; nature of the dissertations and their relationship to courses, topics, faculty, and external applied projects; and, opportunities for graduates/alumni to mentor incoming Master and Doctoral students.

Metaphor

If leadership learning is a system, courses should not be created separately; they should be selected collaboratively to ensure alignment and integration. Furthermore, because technology is increasingly part of the design of leadership learning "it rules us as much as laws do" (Jasanoff, 2016: Para. 1[164]) courses are political and ethical: Designing and selecting courses separately rather than as a system sends a message that learners are not important or worthy; tends to produce a collection of topics and content that can lead to disconnected learning; and makes the role of teaching more difficult because instructors do not understand where the content connections are intended so cannot help the learners to synthesize their understanding.

One approach to promote integrated content for leadership learning may be borrowed from the illustration created by Hollis Scarborough referred to as the Scarborough (2001[165]) "reading rope" metaphor (Figure 15). Her visualization reshaped thinking about the complexity of reading by suggesting that skilled reading is an integration of critical elements with sub-elements that when brought together form a tightly woven rope.

Figure 15. Reading Rope Metaphor

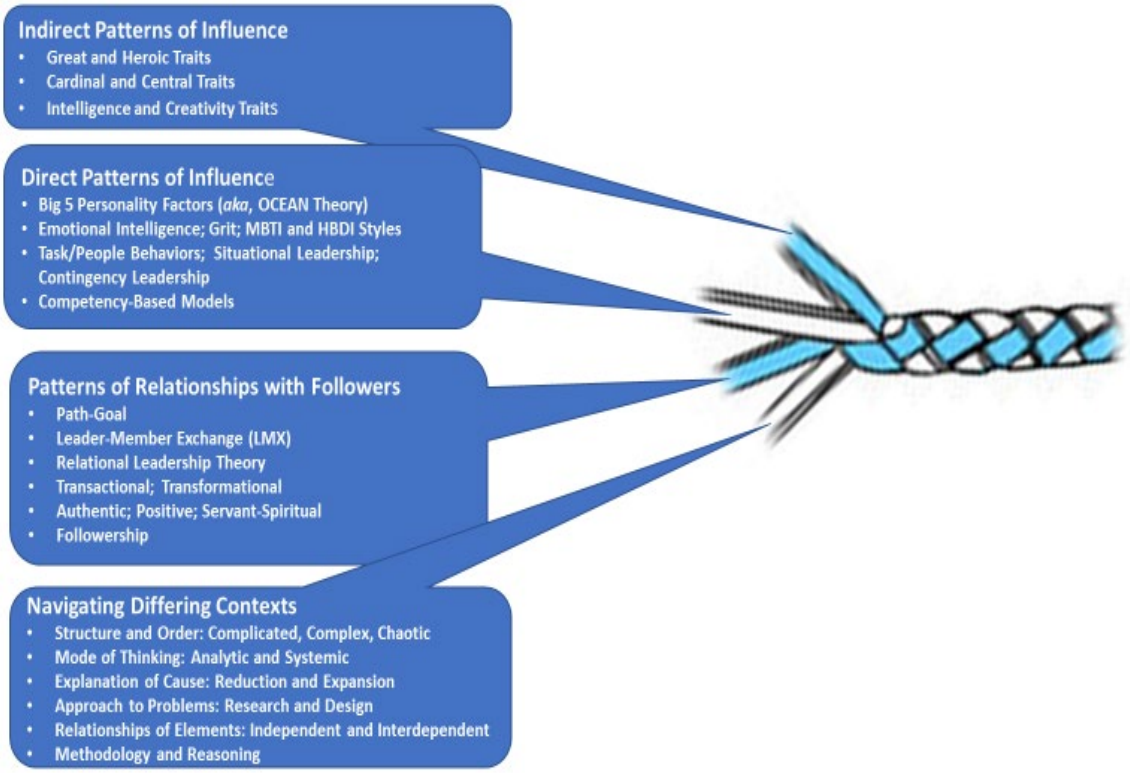


This image presents two primary elements and seven sub-elements. As these are *woven,* they co-produce skilled reading, defined as fluent execution and coordination of word recognition and text comprehension. The metaphor suggests that skilled reading is a complex proficiency that results from integrating separate components; no individual strand by itself can produce skilled reading; "reading is a multifaceted skill, gradually acquired over years of instruction and practice (IDA, 2018[166])."

A woven rope metaphor is a useful way to select content for learning leadership because it supports the system view that learning is a complex proficiency that emerges from the integration of many elements. Furthermore, as there are many theories and models of leadership, Starr's (2020[1]) framework of four themes that account for the content topics of most HEI leadership programs and courses easily fit this metaphor. These incorporate the descriptions and practices of leaders and leadership from the earliest civilizations to the present including what has been listed as 21st century leadership skills. The first theme is **Indirect Patterns of Influence** which describes heroic traits and leading ideas and practices. The second is **Direct Patterns of Influence** that describes multiple traits, behaviors, styles, and competencies. The third is **Patterns of Relationships with Followers** that describes social processes, relationships, needs and interests. The fourth theme is **Navigating**

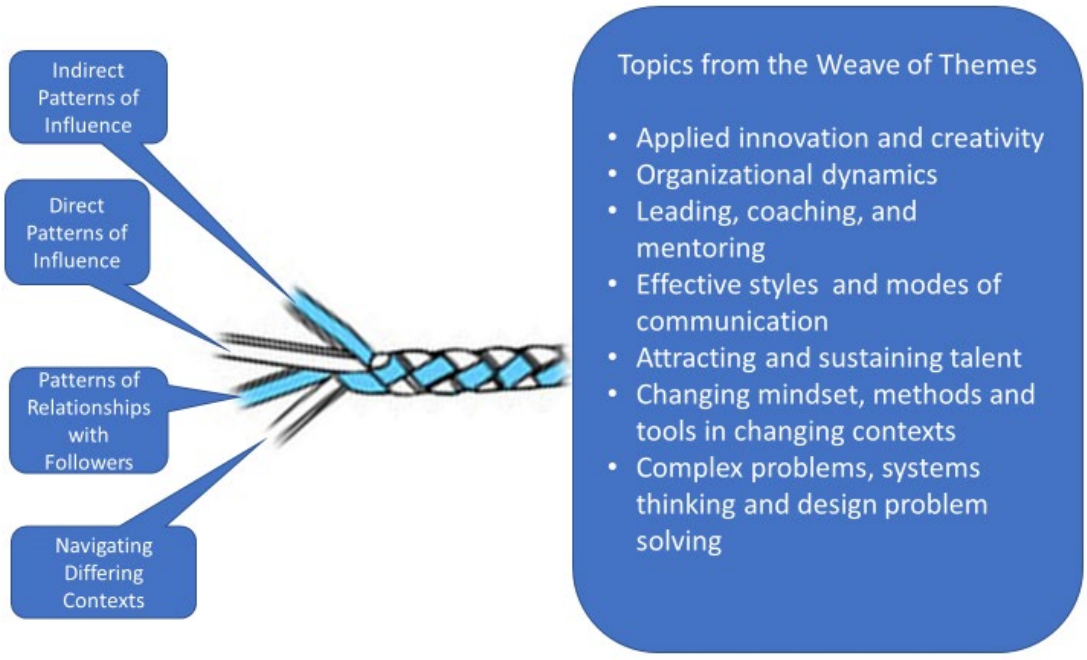
Differing Contexts that describes the mindsets, methods, and tools applied in differing contexts, particularly those that shift from complicated to dynamically complex and where a leader much change from analytic to systemic thinking. Figure 16 suggests the input variables for a content rope metaphor for learning leadership.

Figure 16. Leadership Content Rope



By drawing from the interrelationships among the four themes, integrated topics and courses can be selected from a wide range of leadership challenges. For example, "Applied innovation and creativity" may be considered an important leadership topic based on survey research collected from HEIs which supports Selznick (1957, 1987[167]) who described the relationship between leadership and creativity more than 60 years ago. Furthermore, a comprehensive review by Mainemelis, Kark and Epitropaki, (2015[168]) reported that creative leadership research and practice are described through three conceptualizations. One is *directing the materialization of a leader's creative vision* which is supported by the theme of **Indirect Patterns of Influence**. The second is *facilitating employee creativity* which is supported by the competencies in the theme of **Direct Patterns of Influence**. The third is *integrating heterogenous creative contributions from colleagues* which is supported by the influence behaviors in the theme of **Patterns of Relationships with Followers** (Figure 17).

Figure 17. Learning Leadership Content Rope



The integration of **Direct Patterns of Influence** and **Patterns of Relationships with Followers** could generate topics such as *organizational dynamics*, *leading, coaching and mentoring*, *effective styles and modes of communication* and *attracting and sustaining talent*. These topic areas reflect the importance of decision making in organizational contexts to avoid obstacles and promote positive relationships, trust and shared meanings in pursuit of organizational goals. These topics also can describe how leadership, followership, coaching and mentoring are related, and how clear communication between leaders and colleagues produces a culture that can attract and retain talented and committed people.

Drawing from the integration of **Navigating Differing Contexts** with **Indirect Patterns of Influence** and with **Direct Patterns of Influence** can generate topics such as *changing mindset, methods and tools in changing contexts* and *complex problems, systems thinking and design-based problem solving*. These topics are important because they challenge the prevailing ways of thinking and solving problems which do not adequately incorporate the importance of variable contexts. For example, while a creative leadership style has gained in popularity and has been cited as an important 21st century skill, this leadership style may not be easily accepted within an organization's cultural context. This is because a creative leader may formulate goals and solve problems with a mindset which conflicts with the prevailing approach held by the organization (Hunter, Thoroughgood, Myer & Ligon, 2011[169]). Organizations may espouse the importance of creative leadership, but when immersed in turbulent and complex contexts, most senior leaders become risk-averse and threatened, and creative leaders tend not to be promoted or retained (Mueller, Goncalo & Kamdar,

2011[170]). Understanding the influences of many types and levels of context can help to mitigate and navigate challenges. Hannah, Uhl-Bien, Avolio & Cavarretta (2009: 898[171]) wrote "we believe extreme contexts create particularly unique contingencies, constraints and causations; requiring researchers to view such leadership as inherently contextualized."

Context Influences: Channel of Communication and Theory of Learning

Anderson (2011[172]) posed the following question: Can there be a common (learning) theory for online education? Anderson's response was that the task was fruitless and after positing his best version in the form of a model, admitted it was incomplete and impossible. While Means, Bakia and Murphy (2014[173]) list pedagogy as an important element of online learning, they do not address at a deep level how other theories of learning operate in the virtual context. In a summary of more than a dozen learning approaches drawn from multiple perspectives of pedagogy and andragogy, Picciano (2017[174]; 2019[175]) suggested that rather than seeking a single theory for online learning, a framework would be better. He called his model, "blending with pedagogical purpose" because he applied a *blended/hybrid* approach based on andragogic theory that included the interdependent role of an instructor that was "not simply about learning content or a skill because the teacher also supports students socially and emotionally (p. 180)." His model stresses that any online course should aim to develop a *learning community* which is anticipated to emerge from the interaction of three characteristics previously described by Wenger and Lave (1991[176]) and Garrison, Anderson & Archer (2000[177]). One is that a single online course should have adaptive characteristics that can be extended and generalized to other courses in the same program. Another is that the course should enable multiple interactions between students and teacher, and between people and content. Third is that students should engage not only in directed learning, but they may also be supported for self-study and independent learning.

Picciano's andragogic model for the online context holds a systems perspective that can readily apply to learning leadership. For example, there are multiple collaborations among elements (student, teacher and content); he argues for the importance of reflection of what has been experienced in leadership opportunities; the contribution of student-generated content with peer-review allows for social comparison and broader leadership discussions; and there is awareness that the socio-emotional experience of leadership must be facilitated by the teacher which means leadership learning that has a virtual context must add or blend opportunities for f2f interactions. The outcome of this model of blended online education, in addition to meeting learning objectives set by the teacher, is the importance of development or emergence of a learning leadership community.

Lee and McLouglin (2007[178]) argued that heutagogy or self-determined learning expands the meaning of a learner's content and context. Rather than being restricted by instructor-supplied content, the heutagogical approach enables learner-generated content which includes reflections about the learning process (double loop learning)

and shifting mindset to address challenges in novel ways and with new methods and tools. The online context offers these opportunities. While the self-directed learner in andragogy is provided with traditional content from the instructor (e.g., textbooks and academic journals), the self-determined learner in heutagogy expands this by seeking, discovering, and evaluating leadership content from many additional online sources including from interactions with colleagues. Lee and McLouglin (2007: 29[178]) wrote that the online channel offers

> … [new and emerging tools such as] blogs, wikis, RSS, podcasting, social networking, folksonomies and peer-to-peer media sharing [to] enable connectivity and make it easier for students to connect with and learn from one another… [as well as] allow[ing] them to exercise their creativity… [and] enabling collaboration and the production of shared artifacts [that] transcend the boundaries of the classroom or institution.

Chapnick and Meloy (2005[179]) noted that the traditional approach of a fixed curriculum and instructor-set learning objectives have less relevance in heutagogy where the person knows how to learn and can decide what content must be understood for personally mastering a topic. While for many leadership topics there are essential content and competencies that may be mandatory, heutagogy supports a flexible curriculum that is open to change and can be negotiated between the instructor and learner. This is enabled by the vast opportunities and tools for accessing knowledge online. Asynchronous discussion groups and web conferences, for example, make this viable for learners because they allow peer-to-peer and learner-instructor collaborations which allow learners to determine where, when and how they want to learn (Hase, 2009[180]). This broader learning process by the student changes the role of instructor. In pedagogy and andragogy the teacher supplies a map and directs the student to learn; in heutagogy the instructor serves as a compass and navigator, co-active participant, facilitator, and mentor who can validate and verify the content and help the learner to link concepts.

Badke, Han, Matties, Rapske and Whatley (2012[181]) evaluated the relationship between pedagogy, andragogy and heutagogy in the online environment and noted that for heutagogy, the learning context is critical:

> In the face of what is now a dramatically new era in education, technology cannot be seen as a mere adjunct tool. Rather, it needs to become a deeply integrated component within the educational task (because) the mere presence of technology does not create skilled information handlers (p. 17).

Badke et al (2012) argue that for a self-determined learner, online content has become a plentiful commodity available free at any time. The implication is that a professor who gives a f2f lecture supported by slides describing traditional content available everywhere has become an anachronism (Badke, 2008[182]). The new context or space of learning, therefore, must change to where one can learn how to learn which includes how to navigate topics that are available in a "sea of information, most of it digital, while learning how to solve problems and address issues (p. 18)."

While the amount of virtual/online leadership content continues to increase, student/learner and teacher/facilitator characteristics interact with learning preferences and outcomes. Narain (2014[183]) reported that based on survey data, face-to-face meetings were rated by those who attend them as significantly more creative, more communicative, and as producing more shared information than meetings held virtually/online. This was supported by Bersin (2015[184]) who reported a survey based on responses from approximately 1200 business managers. He found that while virtual courses were required by 97% of respondents - it was not widely desired for learning *leadership* content. For example, 83% of managers over the age of 35 years, and 90% of managers under the age of 35 years preferred f2f leadership learning classes. Furthermore, 71% of men and 83% of women rated f2f classes as more valuable and favorable than online leadership classes. While online learning was rated more convenient because it could be completed on one's own time (82%), at one's own pace (68%), and because travel was not required (66%), none reported that the learning experience was better when online. The reasons why concerned the absence or difficulty acquiring interpersonal leadership proficiencies, i.e., soft skills.

The challenge of virtual leadership learning compared to the opportunities and experiences afforded in the f2f context concern primarily the acquisition and demonstration of empathy, trust, and other soft skills defined as "that relationship factor involved in human interaction required to achieve positive outcomes from the leadership process (Brunghardt, 2011:1[11])." To acquire these and to engage in reflection of the value and outcomes of experiential characteristics of leadership require guided instructor and/or coaching by a qualified instructor even if a student has considerable prior experience. As noted by Kirscher, Sweller and Clark (2006: 75[185]), based on several meta-analyses of effectiveness,

> Although unguided or minimally guided instructional approaches are very popular and intuitively appealing, the point is made that these approaches ignore both the structures that constitute human cognitive architecture and evidence from empirical studies over the past half-century that consistently indicate that minimally guided instruction is less effective and less efficient than instructional approaches that place a strong emphasis on guidance of the student learning process. The advantage of guidance begins to recede only when learners have sufficiently high prior knowledge to provide "internal" guidance.

An online education channel challenges the learning of interpersonal leadership competencies as well as how they can be practiced in differing contexts with adequate feedback. While video role-playing can provide a safe environment for developing or improving some interpersonal skills (Laus, 2019[186]) and video online gaming has shown some improvement in leadership skill and style development (Nuangjumnong, 2016[187]), evidence is weak and experiential learning by practicing across differing contexts wherein one recognizes and applies feedback about the effects of these skills becomes the obligation of the learner (Doo, 2006[188]).

Course Descriptions

In the final section of this essay, three prototypical course descriptions are suggested. The first is an example of an undergraduate course that applies pedagogy (Table 10). The second is a Master-level course that applies andragogy (Table 11). The third is a doctoral-level course that applies heutagogy (Table 12). Each reflects a system approach and is formatted to include characteristics of the student, instructor, content, context, and learning activities.

Table 10. B.A./B.S. Degree Leadership Course

Applied Innovation and Creativity		
Students		**Instructor**
Open to all undergraduate students. Previous or current experience working in an organization may be helpful but is not required. Your obligations as a student include attending all required meetings; being prepared to discuss assigned course readings and exercises; making up any missed readings, exercises, and assignments made or due during absence; reading for understanding the textbook chapters, supplemental readings, and exercises before class; actively participating in class discussions; and delivering all written assignments per instructions in the syllabus and submitting them per the course schedule.		I am an adjunct instructor who earned a Master of Science degree in Organizational Leadership. I hold a leadership role in the XYZ Corporation as Director of W. My obligations in this course are to address new topics each class session endeavoring to help you understand their details and relationships as we discuss, analyze, and critique leadership theory and practice. I will utilize the university's online course management platforms for the course syllabus, course readings, videos and assignments, lecture notes, discussions, as well as for some email messaging.

Activities and Experiences
Students will learn about leadership innovation and creativity by following the syllabus which defines: ▪ content/topics; ▪ watching videos and lectures; ▪ reading about case study analysis; ▪ engaging in online discussions; ▪ completing individual and group exercises; ▪ writing assigned papers; and ▪ engaging in student research and presentations. Your grading will be evaluated based on your written work and by your class participation including: (1) cognitive dimensions, (2) expressive elements, (3) affective elements, and (4) contribution of comments to the process of group learning. Class discussion allows for disagreement; however, comments must be sustained by evidence from class materials and readings. Class comments are not to be unsupported assertions of opinion, and never personal attacks. Incivility or rudeness of any kind is unacceptable.

Content		Context
Description This course presents leadership as a powerful force for transforming change. Topics include the differences between leadership and management; leadership metaphors; and the history of leadership studies with a focus on visionary, ethical, and creative leadership styles. Topics also include characteristics of creative people; cognitive and affective skills needed to lead change via creative problem solving; how to lead people with different creativity styles and how to build a climate that is conducive to creativity. Case studies will be used for illustration. Learning Objectives Upon successful completion of this course, students will: 1. Distinguish between leaders and managers 2. Define key characteristics of creativity and creative problem solving 3. Delineate the principles of visionary leadership, creative leadership, and ethical leadership 4. Analyze case studies that illuminate real work leadership scenarios 5. Construct an organizational audit and action plan		Communication Channels Conducted online; there are no face-to-face meetings. However, three times during the semester we will meet as a group via Zoom: at the start (for approximately one hour) for introductions; mid-way (for approximately one hour) to discuss any challenges; at the end (for an hour or more) for closure and project support. Course content will be presented via videos and readings that will be posted online each week with questions and requirements for your written responses. Methodology and Learning Approach You will be directed to view, read and discuss specific topics related to this course.

Table 11. M.A./M.S. Degree Leadership Course

Administrative and Ethical Problem Solving and Decision Making	
Students	**Instructor**
Open to all master or doctoral students with at least 3-years' experience working in an organization required. Your obligations as a student include attending all required meetings; being prepared to discuss assigned course readings and exercises; making up any missed readings, exercises, and assignments made or due during absence; reading for understanding the textbook chapters, supplemental readings, and exercises before class; actively participating in class discussions; and delivering all written assignments per instructions in the syllabus and submitting them per the course schedule. You are encouraged to discover and add additional content to the course based on your professional experience or discovered readings during the semester.	I am an adjunct instructor who earned a Doctor of Education (EdD) degree in Organizational Leadership. I am a principal in the XYZ organization where I provide consulting to organizations in the US and abroad focusing on ABC. My obligations in this course are to address the topics in the syllabus endeavoring to help you understand their details and relationships as we discuss, analyze, synthesize and critique leadership theory and practice. My role is to be a content expert and a process consultant to help each member of the class to self-develop and learn based on preferred modes and methods. I will utilize the university's online course management platforms for the course readings, videos and assignments, lecture notes, discussions, as well as for some email messaging.

Activities and Experiences
Leadership students/learners will gain and develop problem-solving and decision-making competencies by participating in the lectures and following the syllabus which defines ▪ content/topics, ▪ watching videos and lectures, ▪ reading about case study analysis, ▪ engaging in online discussions, ▪ completing individual and group exercises, ▪ writing assigned papers, and ▪ engaging in student research and presentations. Central to this course is that the problems and manner of how they are addressed (and decisions made) should be based on your direct professional organizational challenges. Students/learners are encouraged to bring professional challenges (maintaining appropriate confidentiality and protections) into the classroom and to discuss what is learned in the classroom with colleagues. These exchanges are intended to help the class appreciate and discuss how leadership theories/models apply to practice and how practices contribute to leadership theories and models. Your grading will be evaluated based on your written work and by your class participation from the instructor and from your peers. A rubric that defines criteria will be shared. Learning objectives are defined that match the underlying premises of the course topic and that meet and support the learning objectives of the graduate school and program.

Class discussion allows for disagreement; however, comments must be sustained by evidence from class materials and readings. Class comments are not to be unsupported assertions of opinion, and never personal attacks. Incivility or rudeness of any kind is unacceptable.

Content		Context
Description In this course, we will review and discuss research then compare it to your professional practice of how you and your colleagues make administrative, ethical, and social decisions, and try to solve problems. Based on the readings and your experiences, we will evaluate situations and problems where analytic research or systemic design methods can be applied in order to improve both the process and outcome of complex problem solving. Using readings and classroom exercises, we will consider cognitive (thinking) errors or biases, as well as personality, and group and organizational dynamics forces that influence making choices. The outcomes will be what you learn from your peer-class colleagues; the concepts, experiences and reflections within the class; changes in your relationship with others in your professional or personal activities; and your contributions to the performance of the organization of which you are a part. Learning Objectives Upon successful completion of this course, students will: ▪ Understand and use descriptive ('everyday") and prescriptive ("improved") strategies and processes for decision making/problem solving based on challenges from your professional work ▪ Understand and apply normative ("ideal") strategies for decision making and problem solving based on challenges from your professional work ▪ Understand the differences between individual and group decision making/problem solving based on challenges from your professional work ▪ Understand how conflict, leadership and ethics influence decision making/problem solving based on challenges from your professional work ▪ Write scholarly papers or present and describe a project that demonstrates		Communication Channels Conducted in hybrid/blended format; there are face-to-face meetings, and virtual meetings held via Zoom. Course delivery will be based on the in-class presentations by the instructor and students, as well as from Zoom presentations and via videos and readings that will be posted online each week. Methodology and Learning Approach You will be directed to view, read and discuss specific topics related to this course. However, if new or relevant issues emerge based on current events or opportunities or student expertise, these may be incorporated into the course. The responsibility for learning in this course is shared by the instructor and students/learners. The instructor will manage and support content and learning context, deliver and facilitate the exchange of information and knowledge, and facilitate and enable group and individual professional and personal development. The students/learners contribute personal and professional experiences, cultural perspective and motivation to learn and teach.

your understanding and application of decision-making and problem-solving strategies to challenges from the academic literature and your professional work.		

Table 12. Doctoral-Degree Leadership Course

Entrepreneurial Leadership in Complex Contexts	
Students	**Instructor**
Admission to this course is for those in the ABC leadership doctoral program or another graduate program with permission of the course professor. Those entering this course should have at least five years' experience in entrepreneurial start-up and management ventures, a flexible mindset, a high degree of autonomy, concept and practice persistence, academic discipline, and creativity. Your obligations include attending all required meetings; being prepared to discuss assigned course readings and exercises; actively participating in class discussions; and delivering assignments that demonstrate learning. These may be based on the syllabus or based on professional experience or discovered readings during the semester. To be admitted you must provide to the course instructor examples of previous papers published or that you have written at a level appropriate for academic or professional journals and demonstrating scholarly thinking and practice.	I earned a Doctor of Philosophy (PhD) degree in Strategy, have had more than two decades experience in new start-up ventures, and have written and published papers concerning entrepreneurial leadership or similar topics in academic and professional sources. My obligations in this course are to be available as a guide and to facilitate the processes that can help you learn the course topic and prepare you for selecting and writing the required doctoral dissertation. My role is to facilitate and coach you to self-develop and learn based on your preferred modes, interests, purposes and methods of learning. We all have access to the university's online course management platforms to support learning content. I will put content on this platform, and I urge you to find additional content that can be added, shared and discussed. In addition, you are encouraged to seek and use other sources available from social media or other channels or means if they are appropriate to learning.

Activities and Experiences
Participants in this course will examine, study, practice - as appropriate - and present to colleagues what they learn about the interactions of context and leadership proficiencies on entrepreneurship outcomes. While the syllabus provides topics and readings to guide the coursework, the direction and details can be adjusted as the learning ensues. The essential issues that must be covered are noted, but desirable and opportunistic issues that individual learners may want to cover can be added and discussed. Working collaboratively is urged. Entrepreneurial leadership is improved when mentoring from colleagues is available. Colleagues include those in the class, the instructor, and an outside network. Expanding contexts is also important. Too often entrepreneurs focus on a single product, service or industry which limits leadership development. For this reason, it is important to share practices across different environments, topics and cultures.

Be reflective not only about what you learn but about how you are learning leadership. This tends to be a gradual process that increases with more applications.

Class discussion allows for disagreement; however, comments must be sustained by evidence from class materials and readings. Class comments are not to be unsupported assertions of opinion, and never personal attacks. Incivility or rudeness of any kind is unacceptable.

Content		**Context**
Description From a system perspective, success of entrepreneurial leadership depends on interrelationships between leaders, followers (and customers), product/service content, and context. In this course two of these elements and their interactions are examined: How do differing contexts influence entrepreneurial leadership performance? What entrepreneurial leadership proficiencies are appropriate and effective in differing contexts? In 2002, Gupta et al (p. 241) noted, "In the increasingly turbulent and competitive environment business firms face today, a type of entrepreneurial leader distinct from other behavioral forms of leadership is required." We examine if the 2020 context – characterized by Covid-19, political divisiveness, educational chaos and more – is qualitatively or quantitively equal to the context of 20 years ago. Learning Objectives Answers to the two questions posed are not well-established in the academic or practice literature which means they need to be identified and discovered using the following guidelines: ▪ Understand why proficiencies and context are important to entrepreneurial leadership ▪ Discern the frameworks and methods by which proficiencies and contexts can be identified using analysis and synthesis ▪ Understand different problem formulations and methodologies associated with entrepreneurial leadership ▪ Teach peers how to generate research questions that emerge from the interaction of entrepreneurial leadership proficiencies and context		Communication Channels Conducted in hybrid/blended format; there are face-to-face meetings, and virtual meetings held via Zoom. Course delivery will be based on the in-class presentations by the instructor and students, as well as from Zoom presentations and via videos and readings that will be posted online each week. Methodology and Learning Approach For certain core material you will be directed to view, read and focus on specific topics related to this course. However, your professional or other interests should guide the depth and breadth of your inquiries and applications. Entrepreneurial leaders tend to have a high degree of autonomy, risk-taking, innovativeness, proactiveness, and competitive aggressiveness so you are encouraged to pursue learning based on these proficiencies. Responsibility for learning is shared among all participants and is best accomplished with development of a learning community. The course instructor is available as a resource, guide, and to support content and learning context. The class participants should collaborate, contribute personal and professional experiences and expertise, cultural perspectives, and creative suggestions to teach each other how to learn this topic.

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