Ninja Training Meets Management Education: Integrating Taijutsu into an MBA Complexity Leadership Course

Julian Norris

Abstract
In this paper I describe the integration of taijutsu, a martial art emerging from the Japanese ninja tradition, into an MBA complexity leadership course. There is broad consensus amongst leadership scholars that intangible qualities such as humility, courage, and uncertainty tolerance are particularly important in complex contexts. There is, however, little consensus as to how such qualities can be effectively cultivated. I review the literature related to martial arts training in management education and discuss the pedagogical challenges of developing both the competencies and capacities required to lead in complexity. I introduce taijutsu and describe several training drills and a facilitation methodology intended to help students develop practical fluency with systems thinking and its implications for leadership and decision-making. Student reflections highlight increased engagement along with potential perspectival and behavioral shifts as promising areas for further investigation. I close by making a case for deeper integration of informational and transformational learning within management education.

Keywords
academic discipline/subject areas, complexity, complexity leadership, martial arts, taijutsu, ninjutsu, facilitation, transformative learning, experiential

1University of Calgary, AB, Canada

Corresponding Author:
Julian Norris, Haskayne School of Business, University of Calgary, 2500 University Drive, NW, Calgary, AB T2N 1N4, Canada.
Email: norrisja@ucalgary.ca
Grappling With Complexity

“Next!”

With nervous laughter, a woman takes her place in front of a grizzled ninja master brandishing a spear. Eyes fixated on the point of the weapon, her movements are tense and awkward as she struggles unsuccessfully to avoid a flurry of attacks.

The attacker pauses. The woman is invited to bring awareness to the patterns of tension and contraction in her movements. She practices relaxing her stance, softening her gaze and shifting her focus from the weapon to the one wielding it. And then the attacks resume.

But now the encounter looks more like a dance than a confrontation. The woman appears to be flowing around the strikes as they are delivered rather than belatedly reacting to them. She seems to have all the time in the world. Her participation in the intensity of this moment is graceful, fierce, poised and expansive. As the session continues, she begins to move with a quality of spontaneous intelligence that startles attacker and onlookers alike. Something has shifted.

It might sound like the opening scene of an action movie. But it’s day three of an MBA course exploring leadership and complexity. Students are studying the tools of analysis and patterns of intervention required to successfully navigate hyper-complexity and disruptive change. They have read that such interventions are often non-linear, non-forceful and may appear to flout conventional leadership norms. Now they are exploring the concepts somatically, using techniques developed in another era to deal with lethal challenges few modern humans will ever encounter.

This paper offers the first account of ninja training within the management education literature. I am not advocating for educators to replicate the instructional methods described here but rather offering an illustrative case highlighting one effort to address a core challenge within management education; how do we educate for both competencies, the skills and knowledge that our discipline traditionally addresses, and capacities—the mindsets, sensibilities and metaskills that a growing chorus of leadership scholars argue are critical to meet the complexities of a rapidly changing world?
Martial Arts in Management Education

Strategy conjoins the Greek words stratos, meaning “army,” and agein, meaning “to lead” (Bracker, 1980). It’s a good reminder that management education has always drawn from martial traditions (Westwood & Jack, 2008). Military generals from Sun Tzu to McChrystal regularly appear on our reading lists, while core topics from supply chain management to business intelligence draw from or originated in military contexts (Hugos, 2018; Schultz et al., 1994). Commando training “assault courses” were rebranded after WW2 as “ropes courses” and are widely used in corporate and business school settings (Kourtesopoulou & Kriemadis, 2020). The military acronym VUCA (volatile, uncertain, complex and ambiguous) coined to describe the post-Cold War strategic landscape (Stiehm, 2002) has been widely adopted within the management literature (Bennett & Lemoine, 2014; Millar et al., 2018) while numerous MBA programs offer military-based courses ranging from boot camp experiences at HEC Paris (Sack, 2013) and Wharton (Laymon & Campbell, 2001), special forces-derived resiliency training at Queens (Gibson, 2017) and the application of combat leadership principles at Ivey (Seijits, 2014).

Martial arts have played an equally long role in leadership education. Young men at the Ancient Greek palæstra not only studied pankration, a dynamic combination of boxing and wrestling, but engaged in bouts of dialogical wrestling (agon) in preparation for their roles as leaders and active citizens. A cross between a mixed-martial arts ring and a graduate philosophy class, the palæstra was a favored classroom for Socrates (Reid, 2010) and Plato recounts numerous dialogs around the value of such training in cultivating bravery and virtue (Kenyon, 2020). Combat and debate were both viewed as competitive disciplines that could be honed through training. This concept greatly influenced the development of physical training within American university education (Hartwell, 1886) and 2,000 years later, EMBA students can still be found grappling in a judo class to anchor their leadership “soft skills” (Chikina, 2014). Clawson and Doner (1996) describe the integration of aikido classes into the leadership curriculum for all MBA students at the University of Virginia over a 3 years period while similar, if less extensive, examples continue to be found in management programs around the world (e.g., Wharton, 2021).

Martial artists regularly claim that their disciplines lead to beneficial non-martial outcomes (Bowman, 2019; Phillips, 2016) with contemporary schools marketing outcomes such as self-discipline, confidence or perseverance (Beesley & Fraser-Thomas, 2014). The evidence for such outcomes, however, is mixed. Bouley (2008) found that martial artists themselves were
confident that their training resulted in transferable leadership skills, but when Joko (2009) assessed the leadership competencies of black-belt martial artists from the same traditions, using Kouzes and Posner’s (2003) leadership practices inventory, she found no correlation between martial and leadership competency. Indeed, the martial artists scored no higher than “moderate” on any leadership competency scale. However, research by Johnson and Naimi (2009) along with meta-analyses by Vertonghen and Theeboom (2010) and Croom (2014), found that martial arts training correlates positively, but inconclusively, with the development of leadership-related personality traits such as self-confidence, self-regulation and psychological well-being. Key variables impacting this correlation include the style of art, the way it is taught and the overall learning climate. A challenge for educators is that such benefits derive from intensive training over time (Jennings, 2010; Mottern, 2020) requiring a learning commitment few undertake (Leonard, 2000; Lothes, 2015). What, if anything, can someone realistically learn about leadership in a handful of sessions tacked onto an MBA class?

One answer may be found in the work of practitioners who have incorporated aikido, a non-competitive martial art, into leadership training (e.g., Clawson & Doner, 1996; Crum, 1997; Leonard, 2000; Palmer, 2009; Whitelaw, 2012). Of particular significance is the work of Strozzi-Heckler (2007) blending aikido with somatic coaching, a discipline that integrates body awareness, bodywork and mindfulness with leadership coaching. This approach catalyzes shifts in self-awareness which, when supported by sustained practice, may lead to the integration of new leadership capabilities. Strozzi-Heckler’s somatic approach (Blake et al., 2016) pivots away from the combative ethos that has threaded its way from the Hellenic tradition into management education, offering a praxis that still seeks to cultivate brave and virtuous leaders but that eschews shallow competition for a deeper way of harmony and mutual flourishing.

Education for Complexity

Krakauer (2019), President of the Santa Fe Institute, asserts that “the future prosperity of life on Earth” requires that we “better understand the workings of complexity” (p. 233). Complexity, he suggests, is an interdisciplinary language describing properties such as non-linearity, self-organization and emergence that underpin ecological, socio-technical, political, financial, and organizational systems alike. Talanquer et al. (2020) argue that educating for such complexity requires us to reimagine the way we facilitate post-secondary student learning. Axley and McMahon (2006) argue that traditional mechanistic approaches in management education offer limited value for
teaching students about complex adaptive systems, while Sargut and McGrath (2011) suggest that, “collectively we know a good deal about how to navigate complexity—but that knowledge hasn’t permeated the thinking of most of today’s executives or the business schools that teach tomorrow’s managers” (p. 69).

While they might dispute Pflaeging’s (2020) assertion that “complexity killed management,” some management educators have embraced Wheatley’s (1992) influential articulation of distinctive leadership principles suggested by the complexity sciences. Heifetz et al. (2009) argues that complexity challenges are invariably amplified when we approach them from overly simplistic or purely technical perspectives, while Snowden and Boone (2007) remind us that leadership interventions which make perfect sense in a complicated but fundamentally ordered system will tend to fail or backfire in complex domains. Such real-world leadership failures have been described in diverse settings including organizational expansion (Reeves et al., 2020), countering extremist networks (McChryostal et al., 2015), responding to financial crises (Hommes, 2018) and ecosystem management (Catalano et al., 2019). Several authors (e.g., Belrhiti et al., 2018; Pascale et al., 2000; Sargut & McGrath, 2011) describe the often counter-intuitive, collaborative and non-linear strategies required by organizational leaders to manage risk and navigate hyper-complexity. This kind of leadership approach is well-documented and has been variously described as systems leadership (Dreier et al., 2019; Senge et al., 2015; adaptive leadership (Heifetz et al., 2009); complexity leadership (Uhl-Bien et al., 2007); agile leadership (Hall & Rowland, 2016); sapient leadership (Chima & Gutman, 2020); complexity capability (Omer, 2017); and complex adaptive leadership (Obolensky, 2014).

A consistent theme emerges from these diverse voices: effective leadership for complex contexts requires the cultivation of both competencies and capacities (Norris & Blakeman, 2021). Competencies describe the theoretical frameworks and practical strategies required to intervene in complex systems, and can be learned through conventional approaches sometimes referred to as competency-based management education (Spence & McDonald, 2015). Such competencies however are mediated by a constellation of intangible capacities or qualities such as humility, curiosity, reflexivity and uncertainty tolerance. Kuechler and Stedham (2018) argue that traditional management education pedagogies are predicated on knowledge and skill acquisition but fall short when it comes to facilitating the “cognitive restructuring” required to shift worldviews and behavioral patterns. This raises a vital question: how does one actually become more humble, curious, self-aware or brave? Goleman and Davidson (2018) review the evidence for the cultivation of what they call altered traits though contemplative practice.
noting, for example, that empathic concern can be measurably increased after as little as 8 hours engaging in a specific meditation practice. Omer (2017) suggests that such qualities are developed through experiences and practices that foster transformative learning leading to what Berger and Johnston (2015) call complexity fitness. Kegan (2000) describes these distinct approaches to learning as informational and transformational, which various authors (e.g., Hassan, 2013) locate along horizontal and vertical axes.

Viewed through this lens, it is not surprising that, as Seow et al. (2019) discovered, simply adding experiential activities like project-based learning and mentoring to traditional management education curriculum does not necessarily result in measurable changes in the way students attempt to solve complex challenges. Spence and McDonald (2015) suggest that educating for complexity requires the integration of vertical and horizontal approaches. Those attempting such integration are likely to encounter three significant fault lines in competency-based management education (CBME):

1. Management education generally enshrines the ordered systems approach that is so often a blindspot for leaders in complex contexts. We are trying to teach new mindsets using tools that tacitly reinforce old mindsets and, according to Marion and Uhl-Bien (2011), the greatest challenge for complexity scholars and practitioners alike is “relaxing their attachment to traditional perspectives of leadership” (p. 394). In most CBME, new knowledge and skills are built sequentially onto prior learning. But the learning required for complexity leadership is often discontinuous; rather than building on a set of prerequisites, it may require un-learning as a starting point (Burmester, 2021) along with deep shifts in worldview (Dent, 1999). As Axley and McMahon (2006) remind us, we should focus equally on the process of teaching complexity as on the course content.

2. CBME tends to conflate experiential learning with participation in an activity. Experiential learning is widely incorporated in management education (Reynolds, 2009) and largely draws from Kolb’s influential model (Kumar & Bhandarker, 2020) “whereby knowledge is created through the transformation of experience” (Kolb, 1984, p. 41). The process of “transformation” however varies widely from primarily cognitive content reflection (Eckhaus et al., 2017; Leal-Rodriguez & Albort-Morant, 2019) to psychodynamic group processes involving critical reflection along with somatic, reflexive and emotional elements (Clancy & Vince, 2019). It may be helpful to distinguish experience-based learning that primarily involves cognitive recall and content reflection following an
experience, from *experiential learning* that, according to Kolb & Kolb (2005), is an inside-out process that centers learners’ agency, allows for cycles of critical reflection and action, and creates space for the affective domains of experience within an appropriate learning context.

3. CBME remains suspicious of the body. While it is notoriously challenging to draw definitive pedagogical conclusions from the neurosciences (Thomas et al., 2019), the literature around leadership embodiment (Bigo & Islam, 2021; McHenry, 2015; Melina et al., 2013) and embodied cognition (Leitan & Chaffey, 2014) underscores the value of hybrid pedagogies. But we remain rooted in a rationalist tradition that views learning as something that happens primarily in the head. As Fenwick (2006) notes, “experiential learning discourses in adult education have tended to presume the existence of an experiencing body inhabited by a reflecting mind” (p. 42). The body is still primarily treated as a delivery system transporting students’ brains between classrooms or Zoom rooms and we generally pay less attention to designing the neurologically rich and somatically coherent learning environments suggested by the literature on affect (e.g., Blackman & Venn, 2010; Schenck & Cruickshank, 2015). There is a deep irony in trying to cultivate mental agility while tacitly reinforcing the need to sit still and listen to a traditional authority.

**Enter the Ninja**

We designed an MBA complexity leadership course that attempts to address these fault lines while helping students develop a practical fluency with systems thinking and its implications for leadership and decision-making in the business environment. At least half of the course time involves conventional classroom sessions where students learn theory, engage in systems mapping exercises and review real world applications of complexity principles to business strategy. Course assessment includes a final paper, an annotated bibliography and various in-class assignments. Around 20 hours are spent exploring complexity principles somatically in a *dojo* (lit. place for practicing the way)—a space dedicated to training in Japanese martial arts. Much of this time is spent at a local Shinto shrine with an attached dojo dedicated to the study of *taijutsu*, a martial art emerging from the Japanese ninja tradition. Since this tradition may be unfamiliar, I offer some framing context.

*Ninja*² are archetypally mysterious shadow warriors with magical powers (Ashrafian, 2014) largely known from folklore and film. Readers may be surprised to learn that they represent a tradition that has been extensively
documented since at least the Middle Ages (Turnbull, 2017). *Ninjutsu*, the strategy and tactics of the ninja, has been described as “the combined art of stealth, unconventional warfare, guerilla warfare and espionage” (Askew, 2020, p. 3), “a practice intended to predict and defeat danger” (Zoughari, 2016, p. 22) and a “path of enlightenment” (Hatsumi, 2004, p. 18). Askew (2020) suggests that ninjutsu has been “greatly influenced by and possibly even born from the ways of *shugendo*” (p. 7), a syncretic Japanese tradition blending animism, folk Shinto, warrior monasticism, North Asian shamanism, tantric Buddhism and Daoism (Hitoshi, 1989; Miyake & Earhart, 2001). Shaped by diverse cultural, military and religious influences, ninjutsu was a closely guarded tradition in several regions of Japan and practitioners were often retained as spies, advisors, bodyguards and unconventional warfare specialists (Serebriakova & Orbach, 2020). It is a complex cultural phenomenon that eludes simplistic categorization.

Contemporary ninjutsu schools largely derive from the lineage established by Takamatsu Toshitsugu and his successor Masaaki Hatsumi (King, 2020) who founded the *Bujinkan* school which primarily focuses on close-quarters combat or *taijutsu* (lit. *body art*). According to Pettinen (2014), taijutsu is an eclectic martial art that builds the capacity to defend oneself from “people who might be significantly larger, stronger or faster than oneself” (p. 148) and is characterized by asymmetric intervention, creative adaptation, unconventional weapons and unorthodox movement (Gattegno, 2020; Mitchell, 2020). Pettinen (2014) describes taijutsu training as “*an intensive long-term cultivation of an individual’s body, mind, and the embedded neurological system*” (p. 151). I introduce taijutsu as an embodied practical philosophy, cultivated through disciplined physical and psycho-spiritual training, that stresses sensitivity and awareness, fluid adaptation, careful observation, disruptive innovation, unorthodox strategy and natural movement to survive violent encounters and influence the course of events. It is a *transformative practice* (Luskin, 2004) that includes distinct techniques for neurophysiological self-regulation (Komori, 2018). In the following section I describe five training drills and the way they are used to explore complexity leadership principles.

**Drill: Don’t Get Hit!**

**Goal: Cultivating Reflexivity and Systems Awareness**

We use an evasion drill called *shiho tenchi tobi* (lit. *four directions heaven and earth leaping*) where the student must evade a series of thrusts and strikes delivered by a teacher wielding a staff as described in the opening section of this paper. Successful evasion requires the student to pivot, dodge or otherwise move as the strike is initiated. Initially students are wary of the weapon
and focus their entire attention on its point with tunnel vision. They also tend to move as far away from the strike as possible, often compromising their balance. As successive strikes are delivered more quickly and the complexity increases, such reactive strategies become increasingly counter-productive. Students are coached to shift their focus from the *symptom* (the weapon) to the *system* (the wielder) that is delivering it and they learn that by paying attention to weak signals, such as movement in the spear-wielder’s shoulders, they can anticipate the strike before the weapon itself moves. Similarly, by moving as little as necessary, they retain their balance, allowing them to continue responding to multiple strikes in rapid succession. During the coaching process, students bring awareness to their own internal states, such as their tendency to contract in the face of uncertainty and anxiety, and discover their capacity to intentionally choose a more skillful response. Such reflexivity can be both startling and mobilize a commitment to ongoing practice.

**Drill: Move From Your Freedom**  
**Goal: Cultivating Curiosity**

We draw from a body of ninjutsu practice called *santo tonko no kata* (lit. *the way of the escaping rat*) and have adapted a technique called *te hodoki* (lit. *hand untangling*) which typically focuses on swift escapes from wrist grabs. The activity is done in pairs where one partner grabs the other by one or both wrists. The drill is framed as an exploration where the goal is to learn together rather than to simply escape the grab. Typically students focus on the point of conflict and struggle competitively. Both are invited to bring awareness to the experience of trying to break free and to enact current situations in their life where they are similarly “stuck.” The grabbed one is encouraged to relax, to engage their curiosity and to experiment using three simple principles. They have to: (a) move from their freedom (e.g., joints that are free to move), (b) lead without force (i.e., muscular strength), and (c) find where their “opponent” is vulnerable to disruption. The activity is carried out in a slow and playful manner and students discover opportunities for creative action that were not previously obvious. Rather than learning a technique or best practice, they explore the value of embodied heuristics to guide decision-making and action in the midst of complex entanglement. They critically reflect on how the exercise might mirror elements of their current leadership challenges. They also experience a felt-sense of whole-systems approaches to tackle a granular challenge and discover that the “system” of their training partner is invariably vulnerable to disruptive intervention.

**Drill: Enter and Connect**  
**Goal: Cultivating Audacity**
We practice a partnered drill that draws from a body of practice called muto dori (lit. no sword capture) involving unarmed responses to attacks with weapons. Students must evade the initial attack and move close to their attacker who can then be disarmed and unbalanced. The act of “entering” is repeatedly practiced and students discover that their initial responses shape the subsequent outcome. They are consistently surprised at how powerful and liberating it feels to enter a difficult relationship in this way, and how easy it is to subsequently influence their attacker. Paradoxically, the closer they are to the attacker, the safer they are and the more options they have for creative action. The facilitation process generally starts by guiding students through the mechanics of efficient response and progresses to critical reflection and an invitation to enact the drill as if it were a current professional challenge.

Drill: Finding Flow (AKA the zombie apocalypse)
Goal: Cultivating Fluidity and State-Shifting

The term randori (lit. chaos-taking) describes a variety of free sparring practices that simulate the unpredictable nature of a combat scenario. In regular taijutsu training, students are called “into the middle” of the dojo toward the end of a session and directed to perform specific techniques or simply respond creatively and with flow (nagare) to a series of consecutive or simultaneous attacks. In the course, we use randori to create a powerful experience of cascading complexity and explore how it is mediated by our interior condition. Students discover that they can regulate their neurophysiology and increase their capability for creative response amidst chaotic uncertainty.

The activity has two distinct phases; reaching the edge and finding flow. Both begin with a student standing in the middle of a circle formed by their peers who become “zombies.” Zombies are given a set of behavioral protocols and asked to walk slowly toward the student with outstretched arms and grab or touch them. Students use the skills and principles they have practiced during earlier stages of the dojo to engage or evade the zombies. The activity requires careful facilitation and instructors can calibrate the intensity of the experience by increasing the number and pace of the zombies or by using verbal “triggers” suggested by students themselves.

During the first phase, we are helping students experience the “edge” of their capacity for creative response. This threshold is different for each person and can manifest in patterns of being overwhelmed, contraction or overreaction. At that point the instructor calls a halt and invites the students to describe the experience while they are still “in it.” They describe their internal state and critically reflect on the parallels with their professional lives. They are then invited to “reset” using the practices they have learned for
state-shifting and the zombies resume their onslaught. The instructor offers coaching until they begin to engage the zombies with a new level of capability. This is often a very powerful moment for students and their descriptions of it frequently mirror the characteristic elements of flow states (Csikszentmihalyi, 2004). During a subsequent process of critical reflection, they describe a sense of time having “slowed down,” a sense of moving from a “deeper” self, along with feelings of “effortlessness” and even “enjoyment.” And they express surprise at how “simple” it was to shift deeply held patterns that they had previously felt to be fixed.

Fenwick (2006) suggests that a complexity lens invites us to reconsider simplistic notions of learning transfer; one potential implication of this perspective, increasingly underscored by best practices in psychological trauma treatment (e.g., Watkins et al., 2018), is that our neurological experience of being overwhelmed is the same whether induced by complex workplace realities or by a taijutsu drill. The embodied practices for neurophysiological self-regulation do not so much transfer between contexts but rather build capabilities that can be applied across domains.

**Drill: Eye of the Storm**

**Goal: Exploring Self in System**

We introduce the *shakujo*, a staff closely associated with ninjutsu’s origins in shugendo tradition. Students are given an octagonal staff around five feet in length and are introduced to its historic symbolism. We begin with solo staff handling practice using a form called the *hachiji* (lit. eight-like). As students gain proficiency integrating both dominant and non-dominant sides, the staff begins to flow in a pattern tracing the infinity symbol. We link this to the adaptive cycle characteristic of complex living systems (Holling & Gunderson, 2002) and explore the different forms of contextual leadership mindsets and intervention strategies required at various stages of the cycle. Students also explore principles of relaxed stillness while in motion and practice embodying the *eye of the storm*. They learn partnered drills, and, once they have mastered some basic patterns, practice shifting focus, distance, and timing.

**Pedagogical Considerations**

The integration of these drills into an MBA course seeks to address the gap identified by Kuechler and Stedham (2018) who suggest that traditional management education pedagogies are poorly suited to facilitating behavioral and perspectival shifts. But simply bolting a transformative learning discipline
such as taijutsu onto a regular course is no guarantee that the shifts required to lead in complex contexts (Hogan & Weathers, 2003) will take place. While perspectival shifts can occur rapidly, lasting behavioral shifts require extended practice (Strozzi-Heckler, 2011). As Vertonghen and Theeboom (2010) remind us, the outcomes of martial arts training are determined by not only the type of art but the way it is taught. In the following section, I discuss the way of teaching used in the course.

**Facilitating Learning**

*Facilitation* includes a broad range of educational strategies (Kolb et al., 2014) and often describes a sequential process that, intentionally or not, follows at least the first three stages of Kolb’s ubiquitous learning model; experience, reflection, abstraction, and experimentation (Vince, 1998). In such an approach, students undergo an experience (simulation, action lab, service learning, work placement, etc.) directed by the facilitator, who subsequently guides a process of content-focused reflection (group conversations, debriefs, journaling etc.) intended to transform experience into learning (insights, takeaways, lessons learned etc.). While Kolb’s model has been widely discussed, critiqued and refined (e.g., Jordi, 2011; Kayes, 2002; Kuk & Holst, 2018; Schenck & Cruickshank, 2015) this process (do something and talk about it afterward thereby transforming experience into abstract knowledge) represents the bulk of experiential learning facilitation in management education.

My facilitation approach additionally incorporates somatic coaching (e.g., Feldenkreis, 1981; Goldman Schuyler, 2010; Strozzi-Heckler, 2014), process-oriented and critical reflection techniques (e.g., Bosnak, 2007; Jordi, 2011; Mindell & Mindell, 1992; Reynolds, 1999), transformative learning practices (Apte, 2009; Kitchenham, 2008; Omer, 2016; Taylor, 2000) and the distinctly playful and non-linear pedagogy of *taijutsu* as taught by Masaaki Hatsumi (Pettinen, 2009). This approach encourages students to become conscious of sensations and feelings as they arise in the moment and thereby increase their reflectivity. Jordi (2011) describes this as a “felt-sense” that “hovers just on the edge of our thinking” (p. 192) and suggests that such somatic inquiry offers a more integrative approach to reflective learning. The facilitation also shares commonalities with sports coaching which may be directive (“put your feet here”), inquisitive (“where are you holding tension?”), invitational (“what happens when you look at your partner rather than focusing on the stick”) or observational (“I notice you clench your jaw when your partner approaches”). I avoid reinforcing distinct *informational* and *transformative* learning silos but attempt to collapse and integrate both
domains by pulsing between them. This is often improvisational; a taijutsu drill may create an opening for theoretical elaboration while a classroom discussion may lead to an unplanned somatic exercise. We also follow conceptual through-lines such as the surfacing of mental models. In the classroom, I often encourage students to shift from solving the problem to thinking about how they think about the problem. In the dojo I similarly encourage them to cultivate reflexivity (Omer, 2017) which allows them to modulate their reactive tendencies.

I find it helpful to distinguish between activity and experience; I will habitually ask myself what kind of experience am I hoping to evoke through this activity and why? The zombie drill for example mimics what Radović et al. (2021) call “real world complexity,” enabling students to explore and modulate their own reactions. This requires close attention to what an individual student is experiencing in the moment and calibration of the activity’s variables to create a balance between what Kolb and Kolb (2005) call challenge and support. I often invite students to craft resonant somatic metaphors (Foster, 2015; Matzdorf & Sen, 2016). I may encourage them, for example, to bring to mind a current situation in their life where they feel stuck while engaging in a drill where their partner is restraining their range of motion. Such isomorphic metaphors (Gass, 1991) offer a form of somatic inquiry allowing them to re-experience the neurophysiological affect of challenging leadership dynamics, to discover how their current responses may exacerbate the situation and to explore opportunities for creative action. I always stress that the transformative potential of dojo experiences can only be realized through sustained practice and work with students to craft individual post-course practice plans.

Ethical Considerations

Experiential learning in management education raises important ethical questions (Dean et al., 2020). Participation in the dojo involves a degree of physical and emotional risk which is managed proactively. While caution is required, it is worth noting that the physical risks are objectively low although they may be perceived as high by students in the moment (Davis-Berman & Berman, 2002). Specific taijutsu practices have been modified with safety and accessibility considerations paramount. The interpersonal and systemic power dynamics associated with factors such as race, gender or physical ability are explicitly addressed. Considerable attention is brought to creating a social field that is non-coercive, non-competitive and inclusive. Dojo protocol emphasizes deep respect and explicit consent each time partners work together which creates a mindful and almost reverential learning atmosphere.
quite distinct from regular class settings and somatic disciplines with a more competitive or recreational ethos. It is stressed that students can simply observe or step out of any activity, at any time, for any reason, without explanation. It is also possible that the dojo’s novelty may actually offer a safer learning context within which students feel more free to experiment and fail as beginners. Omer (2016) suggests that transformative learning necessitates “bringing discipline to the experience of failure,” while Anderson et al. (2018) underline the importance of “discomfort while learning.” It is precisely by experimenting with new practices for modulating their responses under duress that students cultivate new capabilities.

What Do Students Learn?

To understand how students experience the course, two separate cohorts of student papers (n=60), along with post-course evaluations, were reviewed and all dojo references collated into a single anonymized text which was then analyzed for key words and themes. Such an approach is necessarily anecdotal and should not be read uncritically (e.g., Clayson, 2009), but two consistent themes emerged, engagement and perspectival/behavioral shifts, that offer starting points for subsequent research.

Engagement

Over 20% of students stated that this had been the most valuable course in their MBA to date. The dojo was variously described as being “life changing,” “an experience which will stay with me forever” and the “piece of the puzzle I felt like I was missing on my MBA journey.” The integration of course elements seems to have facilitated a high quality of engagement with students stating that “I have never felt as interested in the content of a university course as this one,” “I truly feel lucky to have extended my MBA only to be able to take this course,” and even “I feel that all the courses I have taken so far, and all the tuition fees paid, and all the time and effort over the last few years, were spent so that I can take this particular course.” I acknowledge the bias of such self-reports but it is worth considering the possibility that rich somatic experiences may also increase academic and cognitive engagement.

Behavioral and Perspectival Shifts

Students were consistently startled to discover their unconscious tendencies “to exercise force and control” and were surprised at “how little physical effort is required to produce a substantial result.” Students “learned that
control does not necessarily translate to leadership” and realized that “often I use control, force and action as a method of understanding and responding to problems.” The dojo “provided me with a different perspective on how I can approach challenges with a certain softness, fluidity, and grace.” One student observed that “I tried to muscle my way through different exercises...It hit me that I have used similar approaches in many areas of my life over the years.” The experience was often impactful:

I had to dodge and move through a hoard (sic) of my classmates pretending to be zombies. The most profound part of the experience was when I remained centered and calm in the chaos, I was able to move freely and almost in rhythm with what was happening around me. I don’t think that words can describe the change that I feel inside from this experience.

Students also described how they had applied their learning in a range of professional contexts from challenging team dynamics to collective ideation processes. Many expressed motivation to continue some form of practice post-course.

**Conclusion**

I offer four observations by way of conclusion:

1. **Educating for complexity is critical.** Awarding someone an MBA in the 21st century without a functional understanding of complexity seems negligent. As management educators, we have a responsibility to prepare our students as best we can for the realities of an uncertain world. This is likely to require transformative learning not only for our students but for us as educators too.

2. **Complexity leadership requires cultivating both competencies and capacities.** Traditional management education has a strong track record at cultivating competencies. Capacity development requires a transformative learning praxis to catalyze the perspectival and behavioral shifts required to understand and lead in complexity. Educating for complexity requires business schools to explore hybrid pedagogies and a more seamless integration of informational and transformative learning approaches.

3. **Transformative learning can be integrated into academic management courses.** With careful design and a coherent pedagogy, even an activity as unconventional as taijutsu can be incorporated into a regular academic class in ways that deeply engage students. MBA programs are well-known for offering diverse non-credit activities
that draw from arts-based, contemplative, sporting, adventure and performance disciplines. I encourage colleagues who are interested in exploring whole-body or integral approaches to consider integrating such activities into credit courses. The more congruent they are with best practices in adult, experiential and transformative learning, the greater their impact is likely to be.

4. **Teaching complexity leadership is a complex** endeavor. After more than a century, it is hard to find robust evidence that an MBA leads to better business leadership outcomes (Mintzberg & Lampel, 2001). What burden of proof should we place on those experimenting with the integration of transformative learning practices to educate for complexity? Such integration draws on emerging research findings from multiple disciplines including psychology, adult education, neuroscience, embodied cognition, somatic practice and the complexity sciences. As Snowden and Boone (2007) remind us, clear causal relationships and unambiguous best practices are invariably chimerical in complex contexts. This is the domain of emergent practice where linear outcomes are challenging to measure. Our experimentation must therefore risk being accountable by participating in rigorous discourse while making its theoretical foundations, practice models and ongoing learning visible. This paper is an effort to do just that.

**Acknowledgments**

This paper is dedicated to the memory of my dearest friend and colleague Dr. David Lertzman who was killed by a grizzly bear in the Canadian Rockies during the submission process. David profoundly influenced this work through many years as a fellow practitioner, training partner and co-investigator and offered extensive commentary during the writing process. Thanks also to Laura Blakeman, Melanie Goodchild and the two anonymous reviewers for their invaluable feedback. I acknowledge a debt of gratitude to Masaaki Hatsumi and the diverse community of Bujinkan Budo Taijitsu instructors and practitioners from whom I have learned so much over the decades. I particularly recognize Dai Shihan Jay Creasey, founder of the Takedo Dojo and the Usagi Jinja, as a uniquely gifted teacher and practitioner whose contributions have shaped this work definitively. Many colleagues and students from the Haskayne School of Business have joined dojo sessions over the years and their participation has been influential. I also recognize the continuing influence of Sensei James Angevine from the Calgary Ki Society.

**Declaration of Conflicting Interests**

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.
Funding

The author disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: Funding to support student participation in the activities described in this paper has been gratefully received from the Canadian Centre for Advanced Leadership in Business and the Haskayne Adventure Leadership Fund.

ORCID iD

Julian Norris https://orcid.org/0000-0001-7373-5663

Notes

1. The authors are not using the term *trait* to describe the relatively stable elements of personality structure (as measured by psychometric tests like the Hexaco Personality Inventory) but as an enduring characteristic arising from sustained contemplative practice. They contrast such traits with temporary *states*.

2. The Japanese kanji for the word *ninja* can also be read as *shinobi*. Historical references to the shinobi go back to the eighth century while *ninja* is a more recent pronunciation.

3. The author is also a licensed taijutsu instructor.

References

Anderson, L., Hibbert, P., Mason, K., & Rivers, C. (2018). Management education in turbulent times. *Journal of Management Education, 42*(4), 423–440.

Apte, J. (2009). Facilitating transformative learning: A framework for practice. *Australian Journal of Adult Learning, 49*(1), 169–189.

Ashrafian, H. (2014). *Warrior origins: The historical and legendary links between Bodhidharma, Shaolin kung-fu, karate and ninjutsu*. The History Press.

Askew, S. (2020). *Hidden lineage: The Ninja of the Toda clan*. BKR Budo Books.

Axley, S. R., & McMahon, T. R. (2006). Complexity: A frontier for management education. *Journal of Management Education, 30*(2), 295–315.

Beesley, T., & Fraser-Thomas, J. L. (2014). What can mixed martial arts do for you? A content analysis of life skills youth can develop through participation in mixed martial arts. *Journal of Exercise, Movement, and Sport, 46*(1), 89–89.

Belrhiti, Z., Nebot Giralt, A., & Marchal, B. (2018). Complex leadership in healthcare: A scoping review. *International Journal of Health Policy and Management, 7*(12), 1073–1084.

Bennett, N., & Lemoine, J. (2014). What VUCA really means for you. *Harvard Business Review, 92*(1/2), 27.

Berger, J. G., & Johnston, K. (2015). *Simple habits for complex times: Powerful practices for leaders*. Stanford University Press.

Bigo, V., & Islam, G. (2021). Embodiment and management learning: understanding the role of bodily analogy in a yoga-based learning model. *Academy of Management Learning & Education*. Advance online publication. https://doi.org/10.5465/amle.2021.0190
Blackman, L., & Venn, C. (2010). Affect. *Body & Society, 16*(1), 7–28.
Blake, A., Strozzi-Heckler, R., & Haines, S. K. (2016). *Somatics, neuroscience, and leadership*. Retrieved November 10, 2019, from https://embright.org/wp-content/uploads/2011/10/Somatics-Neuroscience-and-Leadership-final.pdf
Bosnak, R. (2007). *Embodiment: Creative imagination in medicine, art and travel*. Routledge.
Bouley, C. L. (2008). Perceived leadership development as a result of martial arts training [Thesis]. Augsburg. Retrieved March 15, 2020 from https://idun.augsburg.edu/cgi/viewcontent.cgi?article=1747&context=etd
Bowman, P. (2019). *Deconstructing martial arts*. Cardiff University Press.
Bracker, J. (1980). The historical development of the strategic management concept. *The Academy of Management Review, 5*(2), 219–224.
Burmester, H. (2021). *Unlearn: A compass for radical transformation*. Perspective Press.
Catalano, A. S., Lyons-White, J., Mills, M. M., & Knight, A. T. (2019). Learning from published project failures in conservation. *Biological Conservation, 238*, 108223.
Chikina, O. (2014). Taking strategy classes in a judo uniform. Globe and Mail. https://www.theglobeandmail.com/report-on-business/careers/business-education/taking-strategy-classes-in-a-judo-uniform/article18314136/
Chima, A., & Gutman, R. (2020, October 29). What it takes to lead through an era of exponential change. *Harvard Business Review*.
Clancy, A., & Vince, R. (2019). “If I want to feel my feelings, I’ll see a bloody shrink”: Learning from the shadow side of experiential learning. *Journal of Management Education, 43*(2), 174–184.
Clawson, J. G., & Doner, J. (1996). Teaching leadership through aikido. *Journal of Management Education, 20*(2), 182–205.
Clayson, D. E. (2009). Student evaluations of teaching: Are they related to what students learn? A meta-analysis and review of the literature. *Journal of Marketing Education, 31*(1), 16–30.
Croom, A. M. (2014). Embodiment of martial arts for mental health: Cultivating psychological wellbeing with martial arts practice. *Archives of Budo Science of Martial Arts and Extreme Sports, 10*, 59–70.
Crum, T. (1997). *Journey to center: Lessons in unifying mind, body and spirit*. Simon & Schuster.
Csikszentmihalyi, M. (2004). *Good business: Leadership, flow, and the making of meaning*. Penguin.
Davis-Berman, J., & Berman, D. (2002). Risk and anxiety in adventure programming. *Journal of Experiential Education, 25*(2), 305–310.
Dean, K. L., Wright, S., & Forray, J. M. (2020). Experiential learning and the moral duty of business schools. *Academy of Management Learning and Education, 19*(4), 569–583.
Dent, E. B. (1999). Complexity science: A worldview shift. *Emergence, 1*(4), 5–19.
Dreier, L., Nabarro, D., & Nelson, J. (2019). *Systems leadership for sustainable development: Strategies for achieving systemic change*. Harvard Kennedy School.
Eckhaus, E., Klein, G., & Kantor, J. (2017). Experiential learning in management education. *Business, Management and Economics Engineering, 15*(1), 42–56.

Feldenkreis, M. (1981). *The elusive obvious: The convergence of movement, neuroplasticity and health*. North Atlantic Books.

Fenwick, T. (2006). Inside out of experiential learning. In R. Edwards, J. Gallacher, & S. Whittaker (Eds.), *Learning outside the academy: International research perspectives on lifelong learning* (pp. 42–55). Routledge.

Foster, D. (2015). Fighters who don’t fight: The case of aikido and somatic metaphorism. *Qualitative Sociology, 38*(2), 165–183.

Gass, M. A. (1991). Enhancing metaphor development in adventure therapy programs. *Journal of Experiential Education, 14*(2), 6–13.

Gattegno, I. (2020). *The Ninja way; the story of the Israeli dojo*. Kihon Press.

Gibson, V. (2017, March 24). Commando training for business students raises alarms from outsiders, defended from inside. *The Queen University Journal*.

Goldman Schuyler, K. (2010). Increasing leadership integrity through mind training and embodied learning. *Consulting Psychology Journal Practice and Research, 62*(1), 21–38.

Goleman, D., & Davidson, R. J. (2018). *Altered traits: Science reveals how meditation changes your mind, brain, and body*. Penguin.

Hall, R. D., & Rowland, C. A. (2016). Leadership development for managers in turbulent times. *The Journal of Management Development, 35*(8), 942–955.

Hartwell, E. M. (1886). *Physical training in American colleges and universities* (No. 5). US Government Printing Office.

Hassan, S. (2013). Concepts of vertical and horizontal integration as an approach to integrated curriculum. *Education in Medicine Journal, 5*(4), pe1–pe5.

Hatsumi, M. (2004). *The way of the Ninja*. Kodansha Inc.

Heifetz, R., Grashow, A., & Linsky, M. (2009). *The practice of adaptive leadership: Tools and tactics for changing your organization and the world*. Harvard Business Press.

Hitoshi, M. (1989). Religious rituals in Shugendo: A summary. *Japanese Journal of Religious Studies, 16*(2/3), 101–116.

Hogan, K., & Weathers, K. C. (2003). Psychological and ecological perspectives on the development of systems thinking. In A. R. Berkowitz, C. H. Nilon, & K. S. Hollweg (Eds.), *Understanding urban ecosystems* (pp. 233–260). Springer.

Holling, C. S., & Gunderson, L. H. (2002). Resilience and adaptive cycles. In C. S. Holling & L. H. Gunderson (Eds.), *Panarchy: understanding transformations in human and natural systems* (pp. 25–62). Island Press.

Hommes, C. H. (2018). *Behavioral and experimental macroeconomics and policy analysis: A complex systems approach* (ECB Working Paper No. 2201). European Central Bank (ECB).

Hugos, M. H. (2018). *Essentials of supply chain management*. John Wiley & Sons.

Jennings, G. B. (2010). Fighters, thinkers and shared cultivation: Experiencing transformation through the long-term practice of traditionalist Chinese martial arts [PhD thesis]. University of Exeter.
Johnson, B., & Naimi, L. (2009). Creativity in training: Incorporating martial arts into leadership development programs. *Leadership & Organizational Management Journal, 2009*(4), 110–123.

Joko, M. (2009). *The leaders of bushido: a study of the leadership practices of black belt martial artists* [PhD thesis]. Pepperdine University.

Jordi, R. (2011). Reframing the concept of reflection: Consciousness, experiential learning, and reflective learning practices. *Adult Education Quarterly, 61*(2), 181–197.

Kayes, D. C. (2002). Experiential learning and its critics: Preserving the role of experience in management learning and education. *Academy of Management Learning and Education, 1*(2), 137–149.

Kegan, R. (2000). What form transforms? A constructive-developmental approach to transformative learning. In J. Mezirow (Ed.), *Learning as transformation: Critical perspectives of a theory in progress* (pp. 35–69). Jossey-Bass.

Kenyon, E. (2020). Socrates at the wrestling school: Plato’s Laches, Lysis, and Charmides. In H. Reid, M. Ralkowski, & C. P. Zoller (Eds.), *Athletics, gymnastics, and agon in Plato* (pp. 51–65). Parnassos Press.

King, P. (2020). *Life secrets of the Amatsu Tatara; the documents of Takamatsu Toshitsugu and interviews with Dr. Hatsumi Masaaki*. British School of Japanese Traditional Medicine.

Kitchenham, A. (2008). The evolution of John Mezirow’s transformative learning theory. *Journal of Transformative Education, 6*(2), 104–123.

Kolb, A. Y., & Kolb, D. A. (2005). Learning styles and learning spaces: Enhancing experiential learning in higher education. *Academy of Management Learning and Education, 4*(2), 193–212.

Kolb, A. Y., Kolb, D. A., Passarelli, A., & Sharma, G. (2014). On becoming an experiential educator: The educator role profile. *Simulation & Gaming, 45*(2), 204–234.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice-Hall, Inc.

Komori, T. (2018). Use of ninja hand signs to eliminate anxiety and strengthen the ability to cope with stress. *Advances in Clinical and Translational Research, 2*(3), 1–7.

Kourtesopoulou, A., & Kriemadis, A. (2020). Exploring the influence of Outdoor Management Development (OMD) program on leadership and teamwork competencies. *Journal of Adventure Education and Outdoor Learning, 21*(3), 247–260.

Kouzes, J. M., & Posner, B. Z. (2003). *The leadership practices inventory (LPI): Self instrument* (Vol. 52). John Wiley & Sons.

Krakauer, D. C. (2019). Complexity: Worlds hidden in plain sight. In D. C. Krakauer (Ed.), *Worlds hidden in Plain Sight: The evolving idea of complexity at the Santa Fe Institute, 1984-2019* (pp. 229–235). Santa Fe Institute Press.

Kuechler, W., & Stedham, Y. (2018). Management education and transformational learning: The integration of mindfulness in an MBA course. *Journal of Management Education, 42*(1), 8–33.

Kuk, H. S., & Holst, J. D. (2018). A dissection of experiential learning theory: Alternative approaches to reflection. *Adult Learning, 29*(4), 150–157.
Kumar, S., & Bhandarker, A. (2020). Experiential learning and its efficacy in management education. *PURUSHARTHA-A journal of Management, Ethics and Spirituality, 13*(1), 35–55.

Laymon, R., & Campbell, K. (2001). Learning to lead Marine style: MBA’s get their feet wet, literally, at boot camp training program. *Wharton Magazine*. Retrieved November 2019, from https://magazine.wharton.upenn.edu/issues/summer-2001/learning-to-lead-marine-style/

Leal-Rodríguez, A. L., & Albort-Morant, G. (2019). Promoting innovative experiential learning practices to improve academic performance: Empirical evidence from a Spanish business school. *Journal of Innovation & Knowledge, 4*(2), 97–103.

Leitan, N. D., & Chaffey, L. (2014). Embodied cognition and its applications: A brief review. *Sensoria A Journal of Mind Brain and Culture, 10*(1), 3–10.

Leonard, G. (2000). *The way of aikido: Life lessons from an American sensei*. Penguin.

Lothes, J. (2015). Differences of novice to black belt Aikido practitioners in mindfulness: A longitudinal study. *International Journal of Wellbeing, 5*(3), 63–71.

Luskin, F. (2004). Transformative practices for integrating mind–body–spirit. *Journal of Alternative & Complementary Medicine, 10*(Suppl. 1), 5–15.

Marion, R., & Uhl-Bien, M. (2011). Implications of complexity science for the study of leadership. In P. Allen, S. Maguire, & B. Mc Kelvey (Eds.), *The Sage handbook of complexity and management* (pp. 385–399). SAGE.

Matzdorf, F., & Sen, R. (2016). Demanding followers, empowered leaders: Dance as an “embodied metaphor” for leader-follower-ship. *Organizational Aesthetics, 5*(1), 114–130.

McChrystal, G. S., Collins, T., Silverman, D., & Fussell, C. (2015). *Team of teams: New rules of engagement for a complex world*. Penguin.

McHenry, M. (2015). Leadership embodiment: how the way we sit and stand can change the way we think and speak. *Journal of Adult Education, 44*(2), 31–32.

Melina, L. R., Burgess, G. J., Lid-Falkman, L., & Marturano, A. (Eds.). (2013). *The embodiment of leadership: A volume in the international leadership series, building leadership bridges*. John Wiley & Sons.

Millar, C. C., Groth, O., & Mahon, J. F. (2018). Management innovation in a VUCA world: Challenges and recommendations. *California Management Review, 61*(1), 5–14.

Mindell, A., & Mindell, A. (1992). *Riding the horse backwards: Process work in theory and practice*. Arkana.

Mintzberg, H., & Lampel, J. (2001, February 19). Do MBAs make better CEOs? *Fortune*.

Mitchell, D. (2020). *Budo Taijutsu: An illustrated reference guide of Bujinkan Dojo Budo Taijutsu*. Budo Dokokai.

Miyake, H., & Earhart, H. B. (2001). *Shugendō: Essays on the structure of Japanese folk religion*. Center for Japanese Studies, University of Michigan.

Mottern, R. (2020). Koryu Bujutsu as a transformative learning experience. *Journal of Transformative Learning, 6*(2), 63–76.

Norris, J., & Blakeman, L. (2021). Learning as social innovation. *Social Innovations Journal, 5*, 1–11.
Obolensky, M. N. (2014). Complex adaptive leadership: Embracing paradox and uncertainty. Gower Publishing, Ltd.

Omer, A. (2016). When imagination leads: cultural leadership and the power of transformative learning. In M. L. Rossman, M. F. Cantwell, R. N. Remen, E. Miller, G. Epstein, B. Roberts, & A. Omer (Eds.), Transformative imagery: Cultivating the Imagination for healing, change, and growth (pp. 312–326). Jessica Kingsley Publishers.

Omer, A. (2017). Imagination, emergence, and the role of transformative learning in complexity leadership. Enlivening Edge. https://www.enliveningedge.org/features/imagination-emergence-role-transformative-learning-complexity-leadership/

Palmer, W. (2009). The intuitive body: Discovering the wisdom of conscious embodiment and aikido. North Atlantic Books.

Pascale, R. T., Millemann, M., & Gioja, L. (2000). Surfing the edge of chaos: The laws of nature and the new laws of business. Currency.

Pettinen, K. (2009). The grammar of the feet: Notion of skill in Taijutsu practice. In L. G. Sbrocchi, K. Haworth, & J. Hogue (Eds.) “The Semiotics of Time” (pp. 473–479). https://doi.org/10.5840/cpsem200959

Pettinen, K. (2014). Somatic skill transmission as storytelling: The role of embodied judgment in Taijutsu practice. PhÆnEx, 9(2), 136–155.

Pflaeging, N. (2020). Organize for complexity: How to get life back into work to build the high-performance organization. BetaCodex Publishing.

Phillips, S. P. (2016). Possible origins: A cultural history of Chinese martial arts, theater, and Religion. Angry Baby Books.

Radović, S., Hummel, H. G. K., & Vermeulen, M. (2021). The challenge of designing ‘more’ experiential learning in higher education programs in the field of teacher education: A systematic review study. International Journal of Lifelong Education, 40, 545–560.

Reeves, M., Levin, S., Fink, T., & Levina, A. (2020). Taming complexity. Harvard Business Review, 98(1), 112–121.

Reid, H. (2010). Wrestling with Socrates. Sport Ethics and Philosophy, 4(2), 157–169.

Reynolds, M. (1999). Critical reflection and management education: Rehabilitating less hierarchical approaches. Journal of Management Education, 23(5), 537–553.

Reynolds, M. (2009). Wild frontiers—Reflections on experiential learning. Management Learning, 40(4), 387–392.

Sack, C. (2013). Military boot camp teaches HEC Paris MBA’s to become true leaders. Business Because. Retrieved March 2020, from https://www.businessbecause.com/news/europe/1969/military-hec-paris-mba

Sargut, G., & McGrath, R. G. (2011). Learning to live with complexity. Harvard Business Review, 89(9), 68–76. 136.

Schenck, J., & Cruickshank, J. (2015). Evolving Kolb: Experiential education in the age of neuroscience. Journal of Experiential Education, 38(1), 73–95.
Schultz, N. O., Collins, A. B., & McCulloch, M. (1994). The ethics of business intelligence. *Journal of Business Ethics, 13*(4), 305–314.

Seijits, G. (2014). *What the military can teach business leaders*. Retrieved March 2020, from https://www.ivey.uwo.ca/leadership/for-leaders/leadership-blogs/2014/07/what-the-military-can-teach-business-leaders/

Senge, P., Hamilton, H., & Kania, J. (2015). The dawn of system leadership. *Stanford Social Innovation Review, 13*(1), 27–33.

Seow, P. S., Pan, G., & Koh, G. (2019). Examining an experiential learning approach to prepare students for the volatile, uncertain, complex and ambiguous (VUCA) work environment. *The International Journal of Educational Management, 17*(1), 62–76.

Serebriakova, P., & Orbach, D. (2020). Irregular warfare in late medieval Japan: Towards a historical understanding of the “Ninja”. *The Journal of Military History, 84*(4), 997–1020.

Snowden, D. J., & Boone, M. E. (2007). A leader’s framework for decision making. A leader’s framework for decision making. *Harvard Business Review, 85*(11), 68–76, 149.

Spence, K. K., & McDonald, M. A. (2015). Assessing vertical development in experiential learning curriculum. *Journal of Experiential Education, 38*(3), 296–312.

Stiehm, J. H. (2002). *U.S. Army war College: Military Education in a Democracy*. Temple University Press.

Strozzi-Heckler, R. (2007). *In search of the warrior spirit: Teaching awareness disciplines to the military*. Blue Snake Books.

Strozzi-Heckler, R. (2011). *The leadership dojo: Build your foundation as an exemplary leader*. Blue Snake Books.

Strozzi-Heckler, R. (2014). *The art of somatic coaching: Embodying skillful action, wisdom and compassion*. North Atlantic Books.

Talanquer, V., Bucat, R., Tasker, R., & Mahaffy, P. G. (2020). Lessons from a pandemic: Educating for complexity, change, uncertainty, vulnerability, and resilience. *Journal of Chemical Education, 97*(9), 2696–2700.

Taylor, E. (2000). Fostering Mezirow’s transformative learning theory in the adult education classroom: A critical review. *Canadian Journal for the Study of Adult Education, 14*(2), 1–28.

Thomas, M. S. C., Ansari, D., & Knowland, V. C. P. (2019). Annual research review: Educational neuroscience: Progress and prospects. *Journal of Child Psychology and Psychiatry, 60*(4), 477–492.

Turnbull, S. (2017). *Ninja: Unmasking the myth*. Casemate Publishers.

Uhl-Bien, M., Marion, R., & McKelvey, B. (2007). Complexity leadership theory: Shifting leadership from the industrial age to the knowledge era. *The Leadership Quarterly, 18*(4), 298–318.

Vertonghen, J., & Theeboom, M. (2010). The social-psychological outcomes of martial arts practise among youth: A review. *Journal of Science and Medicine in Sport, 9*(4), 528–537.

Vince, R. (1998). Behind and beyond Kolb’s learning cycle. *Journal of Management Education, 22*(3), 304–319.
Watkins, L. E., Sprang, K. R., & Rothbaum, B. O. (2018). Treating PTSD: A review of evidence-based psychotherapy interventions. *Frontiers in Behavioral Neuroscience, 12*, 258.

Westwood, R., & Jack, G. (2008). The US commercial-military-political complex and the emergence of international business and management studies. *Critical Perspectives on International Business, 4*(4), 367–388.

Wharton. (2021). *Conflict and you: The power of Aikido*. McNulty Leadership program. https://leadership.wharton.upenn.edu/managing-conflict-power-presence-2/

Wheatley, M. J. (1992). *Leadership and the new science: Learning about organization from an orderly universe*. Berrett-Koehler Publishers.

Whitelaw, G. (2012). *The Zen leader: 10 ways to go from barely managing to leading fearlessly*. Red Wheel/Weiser.

Zoughari, K. (2016). *The Ninja, the secret history of ninjutsu: Ancient shadow warriors of Japan*. Tuttle.