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# Management learning at the speed of life: Designing reflective, creative, and collaborative spaces for millennials

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## ABSTRACT

This paper introduces the concept of “management learning at the speed of life” as a metaphor to inspire millennials. Millennials may face three major problems in relation to management learning: lack of concentration, lack of engagement, and lack of socialization. Management learning at the speed of life addresses these potential problems through three dimensions: reflective, creative, and collaborative learning. This paper illustrates the benefits of reflective, creative, and collaborative spaces for millennials using practices from leadership and personal development courses that were offered over seven years in Canada, Turkey, and the UK. These courses incorporated the latest technology that brought the course activities up to the speed of life.

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## 1. Introduction

There is broad disenchantment with the aloof stance of management education and business schools as articulated by a crisis of confidence (Mitroff, 2004), a climate of ethical indifference (Khurana & Nohria, 2008), a narrow curriculum driven by reductionist models and economic self-interest theories (Ghoshal, 2005; Pfeffer & Fong, 2002), and a widening gap between theory and the world of practice (Bennis & O’Toole, 2005; Mintzberg, 2004). The changing world of workplaces call for a more holistic approach to management education, as there is an increasing need to develop not only analytical and conceptual skills, but also emotional, reflective, creative, and spiritual capabilities for future leaders (Quatro, Waldman, & Galvin, 2007). Furthermore, the management instructors have been seeking ways for effectively involving web 2.0 tools into their lectures within the emerging Higher Education 2.0 environment (Barnatt, 2009).

In addition to the changing context within which business is practiced, the characteristics of the population are changing, too. The new generation, called the Net generation or millennials, face three potential problems in relation to management learning. The first problem involves the challenge of sustaining concentration during studies or lectures, given that millennials seem to be addicted to technology gadgets (Marcus, 2011). Second, students are challenged with engaging in instructor-led lectures (Graves, 2001) and traditional evaluation methods such as paper-and-pencil exams (Volkema, 2010). Third, difficulties associated with social isolation or alienation (Nie, 2001) is becoming pervasive among millennials. To address these

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challenges, this paper develops the concept management learning at the speed of life, which suggests management educators provide reflective, creative, and collaborative spaces for students.

## 2. Management learning at the speed of life

Management learning at the speed of life builds upon related constructs of lifelong learning (Ballou, Bowers, Boyatzis, & Kolb, 1999; Sharples, 2000), continuous learning (Houle, 1988), and self-directed learning (Knowles, 1975). We define *management learning at the speed of life* as a learning philosophy that incorporates reflexivity, creativity, and connectivity to adapt to the fast changing world of work. Taking the perspective of management instruction, this implies a design philosophy that celebrates diversity and gives room for students to develop their own learning approaches. It emphasizes that every student's learning journey is unique, with different departures, means, and destinations.

Management learning at the speed of life is based on three dimensions. The first dimension is reflection, which involves searching for one's own voice and learning motivation at work. Through reflection, an individual can discover a sense of meaning, invoke previous thoughts and actions, and understand the role of the self in life (Scott, 2010). The second dimension is creativity, which involves a search for novel and useful ideas or solutions (Sternberg, 2003). Creativity thrives on a sense of wonder and curiosity, as well as willingness for experimentation with unconventional ideas. The third dimension is collaborative learning, which involves a group of individuals working together on common tasks (Cabrera et al., 2002) to search for understanding or solutions (Palocsay, White, & Zimmerman, 2004). Through the process of collaborative learning, learning becomes a shared and social process (Jackson & MacIsaac, 1994), which is a learning style favoured by millennials (McGlynn, 2005). With these three dimensions, management learning at the speed of life responds to the needs of employees navigating in the new learning landscape.

### 2.1. Millennials

More than half of today's teenagers are mobile data users, and a great majority of them are using social media (Oblinger & Oblinger, 2005). The young members of this global platform have been referred to as Net-Geners, millennials, Generation Y, echo boomers or digital natives, who are characterized by having high digital literacy and multitasking capabilities, operating at "twitch speed." This generation has an inclination for socializing and learning on the Internet, consuming and producing digital information (Twenge, 2007), looking towards personalized careers, believing that they can achieve anything, seeking recognition from others, and demanding instant and frequent feedback (Sacks, 2006). In their everyday lives, millennials study, work, socialize, and live in the digital ecosystem - sending e-mails, sharing photos, downloading songs, and using social networking sites. In terms of lifestyle, distinctions between learning, work, fun, and leisure are blurring (Cooper, 2002) as abundant mobile computing devices and broadband connectivity allows an "always on" culture (Selwyn, 2003). Some researchers argue that millennials do not have the right set of behaviors for undergraduate education (Arum & Roksa, 2011). This argument criticizes students rather than the academic institutions. On the contrary, this article suggests that higher education needs to adapt itself to the lifestyle of the millennials since they are the generation that will be entering higher education and workforce in the next two decades (Conklin, 2012; Hershatter & Epstein, 2010; Thompson & Gregory, 2012).

From the learning aspect, millennials have unique attitudes, some of which may facilitate learning whereas others may hamper learning in the context of higher education.

On the positive side, millennials tend to easily adapt to using different learning approaches (Howe & Strauss, 2007), engage easily in digital learning (Ivanova & Ivanova, 2009), be proficient in multitasking (Bennett, Maton, & Kervin, 2008), have advanced visual memory and visual processing skills (Tapscott, 2009), and utilize communication technologies effectively for interacting with others (Oblinger & Oblinger, 2005).

On the negative side, millennials may easily lose concentration while they are multitasking (Rubinstein, Meyer, & Evans, 2001), may have difficulties in listening and following lectures (Hembrooke & Gay, 2003), may suffer from cognitive overload (Sweller, 1988), may be impatient as they seek instant gratification (Sutherland-Smith, 2002), may have low tolerance for delays (Jones & Cross, 2009), may suffer from lack of socialization and Internet addiction (Cross et al. 2009) may lack critical thinking (Lorenzo & Dziuban, 2006) and complex reasoning and engagement (Arum & Roksa, 2011).

We identify three major problems that millennials face when they are learning:

- a) Lack of concentration: Millennials may be easily distracted on the Internet and may have difficulties in sustaining their concentration over long periods of time or while multitasking. This paper suggests management instructors provide reflective spaces for millennials to address this problem.
- b) Lack of engagement: Millennials might have difficulties in engaging with organization-led performance improvement initiatives where they are expected to demonstrate their performance and engagement for organizational objectives. This article suggests management instructors provide creative spaces for students in order to engage them.
- c) Lack of socialization: Millennials may tend to have difficulties in socializing with people since they are spending a lot of time on the Internet. This may lead to alienation or social isolation. To resolve this problem, this paper suggests management instructors provide collaborative spaces for millennials.

This paper responds these three overarching problems by applying management learning at the speed of life to a course design.

## 2.2. *Applying management learning at the speed of life*

The paper illustrates a selection of projects from courses on Leadership and Personal Development. The courses were offered to senior year undergraduate students in Management and other departments. The courses were offered over seven years in Montreal, Canada; Istanbul, Turkey; and London, UK. Each course section had between 25 and 90 students and lasted for one semester. There were more than 400 students from 90 different countries in total.

As the course format was unique, the orientation week served as a testing ground for students. On the first day, students met their classmates using a networking game and learned fun facts about each other through their Facebook profiles. During the orientation week, we introduced them to the philosophy of management learning at the speed of life, shared our expectations, and went over three course portfolios: Reflective, Creative, and Collaborative Portfolio. We shared exemplary creative, reflective, and collaborative projects of former students to give them a flavor of what it takes to perform well in the class. Some students dropped the course because they did not feel comfortable with the relatively low level of structure in the course and they had the option of dropping the course without consequences, as it was an elective. Many other students thought the course would be a rare opportunity for them to develop their reflective, creative, and collaborative skills through project work.

### 2.2.1. *Designing Reflective spaces*

Millennials are being overwhelmed by the sheer volume and pace of information in the digital ecosystem (Tapscott, 2009). As social media tools enable everyone to have a voice in every medium and the volume of data increases exponentially, the signal to noise ratio on the Internet is getting worse (Howard, 2010). The fog of 'paradexity' (the convergence of paradox and complexity) creates a sense of confusion and uncertainty (Howard, 2010). Too much information and complexity in the digital ecosystem diminishes spaces for reflection. Being overloaded by information brings side effects such as feeling inadequate for keeping up with fast trends, becoming addicted to technology, experiencing forgetfulness, feeling burnout (Howard, 2010), and becoming easily distracted (Menzies & Newson, 2007). We work and live in a frenzied rush that demands swift decision-making and action. With increasing demands and time pressures, it becomes more and more difficult to maintain focus, to slow down and reflect, to search for the deeper meaning, and feel what one's heart wants (Karakas, 2008). One remedy for this problem is allowing enough time and space during management classes for reflection (for example, incorporating a 15-min self-reflection session during the class where students draw a picture or a mindmap of their future goals and dreams or where they come up with an annual personal learning and development plan) and demonstrating "being mode" (Ramsey & Fitzgibbons, 2005) for creative intellectual work (Menzies & Newson, 2007). Reflection is an important skill not just for management students but also for practicing professionals and managers as they work in busy and chaotic workplaces (Goldman, Plack, Roche, Smith, & Turley, 2009). Therefore, it is important for management educators to provide students opportunities for reflective practice (Cunliffe, 2004; Hedberg, 2008) so that students can develop requisite variety and can understand organizations and themselves from several perspectives. Based on Scott (2010) and Schon (1983), we define reflection as the process of questioning, inquiring, and rethinking one's own assumptions, actions, and thoughts to make meaning. Because reflection generates self inquiry and personal insights, it provides the potential to see things in new ways not seen before. Reflection leads to better self-understanding about the habits of the mind and heart, which results in a new level of awareness and action that has impact and relevance for the learner (Pavlovich, Collins, & Jones, 2009).

We suggest management instructors design reflective spaces and projects for students. Business students in particular experience a cultural push for being busy and workaholic as they compete in a global marketplace and multitask. In the middle of the digital complexity and pace, business students may find reflective spaces very useful to slow down and reflect on personal priorities. To encourage students to be self-reflective, management instructors should work on "being moments" and try to fully be present with students (Ramsey & Fitzgibbons, 2005), as well as demonstrate a high degree of mindfulness, spontaneity, and attentiveness during the classes (Mundhenk, 2004). As an example, we have realized during the class that one student was not able to concentrate on the class. Upon this observation, we have requested to meet her after the class and asked her if there was anything we could help her. The student burst into tears as she told us how she experienced problems in her management classes. We have mentored her, offered her suggestions, and encouraged her to be resilient in solving problems. We have asked her to dream and visualize the day she would graduate. We have asked her to reflect on how much her parents would be happy and proud for her. We have also recommended her to write a reflection piece on what she has learned from the process. The student has indeed overcome all the challenges and written a reflective piece on her learning.

As millennials find limited opportunities for reflection, this article suggests instructors include reflection in the management classes. We incorporated a series of reflection exercises and projects into the course, which together made up a "Reflective Portfolio". To better understand themselves, particularly their strengths and developmental gaps, at the beginning of the course students took personality tests and an executive training program called "Zero-Centered Personality Workshop". This executive training program is a 6-h program based on the Enneagram (Goldberg, 1999). It focuses on discovering one's own personality, understanding other personality types, and communicating with them effectively. Nine personality

profiles are presented using mini self-evaluations, stories, interactive role-plays, cartoons, and Hollywood movie clips. After taking the personality tests and the training program, students started working on their reflective portfolio.

For the reflective portfolio, students choose from a variety of projects. One of the options was to write a reflection journal or blog throughout the course to better understand and express the self. Another option was to use *microblogging* as a platform to share snapshot reflections and learning about or beyond the class. Microblogging tools (e.g. Twitter) allow users to send brief text updates or videos. Students' microblogs included personal commentaries, updates about innovative organizations, and the latest business news. By following students' ideas, feelings, and comments reflecting their stream-of-consciousness, we could gain insights into students' learning processes. Little slices of students' lives raised ambient awareness (Kaplan & Haenlein, 2011) over time, eventually weaving a meaningful story and translating into teachable moments. At the end of the semester, the accumulation of thousands of microblogs provided evidence of students' deeper reflection and learning (For more details, see [Appendix A](#)).

Sample feedback demonstrates students' development of reflective competences throughout the course:

"The reflective portfolio has allowed me to advance towards achieving my goals, knowing about my deeper self, and have a positive reflection about my leadership skills. I have never thought of what to become after my graduation, and I have never been exposed to the new mind-sets that were introduced during the past month. I knew about my skills, strengths and talents, but did not know how to apply them into real life. After completing the reflective portfolio, I am no longer a person who spends a lot of time thinking about enjoyable things that are not likely to happen. I now have sound and strategic action plans to overcome my weaknesses and to achieve my future career goals."

"So far this course has helped me reflect on what I want to do in my life. It allowed me to question my thoughts and discover my good qualities along with some qualities I need to improve. I also have learned to get inspiration from arts and literature for my personal learning and development."

### 2.2.2. *Designing creative spaces*

Millenials are reported to have difficulties in engaging with instructor-led lectures. As today's students prefer flexibility where they can feel empowered to design their own creative projects (Dziuban, Moskal, & Hartman, 2005), management education is being transformed by the increasing significance of self-directed learning skills (Rhee, 2003), instructors' response flexibility (Wheeler & McLeod, 2002), and student-directed learning (Kunkel, 2002). Mundhenk (2004) has written on the meaning of being student-centered, contending that student centeredness goes beyond teaching techniques to being fully present with students and serving students' learning needs in the best manner. Ramsey and Fitzgibbons (2005) has described what it means to 'be' and 'become', contending that instructors should create and nurture a learning community where they learn simultaneously with their students.

In response to the engagement problem, management education scholars have also been including artistic and creative processes in their approaches to management education (Adler, 2006; Huffaker & West, 2005; Pink, 2004). We suggest management instructors design creative spaces for students where they can experiment with innovative skills through experiential and project based learning. Using creative spaces, students can go beyond the syllabus to be innovative, create breakthrough projects for the future, and bring their best contributions to the table. The assumption is that students will be truly committed and inspired if they are provided enough freedom to choose and create their own customized projects based on their strengths, dreams and passions. This freedom surely brings more uncertainty and complexity for students who thrive on structure, yet these students still need to learn to cope with increasing paradoxity in their professional lives. Nevertheless, we incorporate just-in-time coaching and guidance sessions for students who have difficulties in navigating uncertainty and complexity.

Using creative spaces, students can experiment with creative skills through project-based learning. Various options for creative projects are collected under a Creative Portfolio. As part of their Creative Portfolio project, students wrote innovative articles. The objective was to write "as if" these articles would be published; in fact, we encouraged students to submit these articles to business blogs, magazines, or practitioner-oriented journals. Several of the students published their articles and shared those publications in class.

In our experience, the more freedom we gave to the students, the more impressive projects turned out to be - provided that there was enough coaching support. (To see other options for the creative portfolio, see [Appendix A](#)).

Students' progress in developing creative competences is evident in their feedback below:

"The creative portfolios inspire you to surpass yourself. It is a really exciting and enjoyable experience. Very effective and useful – not like classes that evaluate the capacity to memorize. There are literally no boundaries in this course ... the sky is the limit!!"

"As a Harry Potter fan, I felt like a hero in one of these movies. You have unearthed the creative potential that lies in us. Your expectations on the portfolios were beyond the course and the textbook. Everything we created in this course was about our best selves, potential and dreams, and our greatest passions in life (about which I was scared and hesitant to express to even myself openly). You have given us a magic wand, taught us how to use it, and turn the world into a more amazing place."

### 2.2.3. Designing collaborative spaces

Millennials are reported to experience problems related to alienation, depersonalisation, and Internet addiction. One of the side effects of intensive technology usage is the feeling of depersonalisation as a result of interacting with machines and impersonal devices (Laura, Marchant, & Smith, 2008). Another is the sense of fragmentation as a result of living in various compartments (Howard, 2010). Although technology enables people to be more connected than ever, the extensive usage of technology leaves the users with a minimal feeling of connection and a loss of a sense of community (Parker-Oliver & Demiris, 2006). To remedy these problems, we suggest management instructors provide collaborative spaces and team projects for students where they can develop high quality connections with their peers.

As the need for innovation has intensified in organizations, the role of collaboration and team work in designing and building knowledge based organizations has become more central (Katzenbach & Smith, 2003). There is extensive research on the critical role of collaboration in the successful implementation of innovation projects (Hoegl & Parboteeah, 2007). Research has also been conducted on the nature, conditions, and outcomes of effective collaboration in co-located (Hardy, Lawrence, & Grant, 2005) and virtual teams (Sarker & Sahay, 2002). Collaboration requires that team members both be able to appreciate individual differences and communicate with each other to achieve a shared goal (Duch, Groh, & Allen, 2001). In accordance with this requirement, collaborative learning promotes a sharing of information in relationships that promotes new growth for each participant (Jackson & MacIsaac, 1994). To develop collaborative skills, we suggest management educators use group projects and team building exercises where students form communities of practice. We recommend instructors to build communities of practice to enable students to become fully engaged in collaborative learning for deep learning of course-related knowledge and principles (Monaghan, 2011). The design of communities of practice gives students a chance to develop their abilities to be self-directed learners in a collaborative setting.

To enable students to experiment with these skills, we design collaborative opportunities and projects for participants where they can work as a team to advance innovation. The first option is to form up teams of executive training companies to design and present collaborative learning workshops to the rest of the class. These workshops use multiple learning methods (role-playing, case, video, exercise, team play, games etc.). Each team signs up for office hours to get coaching and guidance on designing an executive development workshop. During these team coaching sessions, we review possible workshop proposals and discuss ideas on how to make the sessions more insightful, interactive, enjoyable, and memorable. The workshops enable team members to develop proficiency in collaborative competences in a simulated company training program context. During the workshops, the teams typically use a mix of guest speakers, videos, exercises, games, or discussion related to their chosen theme. The titles of the workshops have included Better Collaboration & Communication for Work & Life, Design Thinking & Personal Branding for Your Career, The Learning Organization & The Global Brain, Social Innovation & Global Leadership, Social Responsibility & Global Corporate Citizenship, and *Awaken Your Creative Spirit*. In all instances, the teams have involved the whole class in learning about the theme and have provided a training toolkit for all participants.

Another option under a Collaborative Portfolio was completing a service-learning project. We implemented service-learning as “a form of experiential education in which students engage in activities that address human and community needs together with structured opportunities intentionally designed to promote student learning and development” (Jacoby, 1996, p. 5). Service-learning projects are used to enlighten students about stakeholder needs, social issues, and civic engagement, and to build a better future (Vega, 2007). Students were advised to select a topic that relates to their career goals. The topic can be any problem that is researchable and has an action element. In their projects, students reflected on human and organization dimensions of various global problems and how they could achieve positive change in their spheres of influence. They chose a country and a context and designed a social innovation project, such as starting a non-governmental organization (NGO) that would have a positive impact on wellbeing of people. After completing their projects, students shared their stories, reflections, and learning with each other in an informal world café conversation style (Brown & Isaacs, 2005).

The last project that made up the collaborative portfolio is the Executive Book Club. This book club had been formed during the first week of the course. The books were chosen based on: a) the expertise of the authors, b) suggestions of colleagues, field experts, and managers, c) the number of citations of the particular book on [scholar.google.com](http://scholar.google.com), d) favorable [amazon.com](http://amazon.com) reviews, and e) students' suggestions. Each student posted an executive summary blog for two of the cutting-edge books by the end of the course. Students also made a 7-min presentation for each book and shared a one-page summary handout with the rest of the class. Through this book club, the entire class had access to 200 books (For the full reading list, the readers can contact the corresponding author).

Some of the students' feedback demonstrates how students built close relationships with each other with the help of the collaborative spaces:

“Establishing deeper dialogues, sharing, team work, goodwill, trusting each other, and fun are the words with which I can describe this course at best. Frankly, I had took a dim view to people I don't share the same thoughts, but after this course I feel easy to establish closer relationships with them. I now consider diversity as a true source of richness.”

“Of all the concepts that I've been exposed to, I like the idea of the complexity sciences and the study of interconnectedness. I like to think that we are all connected and some solutions can be found in seemingly unrelated fields, if only we can just establish the right connections .... By analysing social networks, I can establish high quality relationships and energizing networks - virtually and in person - ... [and design] new ways of work and collaboration in teams or organizations.”

### 3. Evaluation of the course and its outcomes

We have used Kirkpatrick's (1976) four-step model to evaluate the course and its outcomes (evaluation of reactions, learning, behaviours, and results). First, we have used reaction evaluation to measure the satisfaction of students with the sessions, the instructors, the assignments, the course, the learning environment, and the learning outcomes. For this purpose, we have used questionnaires for students at the end of the program. Feedback from students was overwhelmingly positive. The instructors received an average rating of 4.90 (compared to 3.90 university average) and the course received an average rating of 4.85 (compared to 3.70 university average) out of a 5-point scale. In particular, the majority of students enjoyed the enthusiasm of instructors (average rating for enthusiasm of faculty was 4.90 out of 5.00). They found the course highly inspiring, arguing that the approach to teaching was much better the tradition approach they had been exposed to. These high ratings reaffirm that the students derived tremendous value from experiencing this course. Although most comments were positive, there were also two comments criticising the lack of transparency regarding the grading process and the uncertainty of evaluation methods. The lowest average ratings concerned the evaluation methods (4.55). The rating of evaluation methods may have been related to students' concerns about the lack of course structure. Although students were forewarned about this on the orientation week, some of them still had difficulties in dealing with ambiguity.

Second, we used learning evaluation to assess students' achievements in their learning. As an instrument, we used a multidimensional performance evaluation for each student's learning portfolio. We employed a set of customized criteria for each project such as the intensity of knowledge, content, innovativeness, reflection, and integration. We neither penalized nor compared students with other students in terms of the level of skill development. We wrote a performance evaluation and feedback letter to each student after assessing his or her project. These letters used a sincere and informal style and were always constructive. Examining the grades in the projects over the semester, we witnessed 10%–40% increase (on average) in students' grades in course projects, which demonstrated the effectiveness of reflective, creative, and collaborative spaces.

Third, we have used behaviour evaluation to assess changes in attitudes, behaviours, and skills in our students. We have collected qualitative data using student essays detailing these changes (the content analysis of these essays is presented in detail in the next section).

Finally, we have used results evaluation to assess tangible results of the course. We had our students review draft reports, engaged them to look into findings, and give feedback, and included them through the presentation of emerging findings in a local workshop. In general, most of the students found the portfolio assignments more challenging than they had expected, but intensely rewarding. Students commented that the portfolios provided them with relevant information about themselves that they could continue to use in the future.

“This course taught me how important creative thinking, collaboration, and reflection are. Our projects were innovative and very relevant to the 21st century business environment. I learnt a great deal over the semester and will use the insights and skills I gained from this class in my future.”

In particular, students reported practical outcomes of this course for their careers:

“The professor always said “keep your dreams alive”, I believe this is the most important advice I have received in my three years here. This is a class that should be taken by all management students. Not only is the material incredibly relevant and indeed helpful in our future but the professor has done an admirable job at inspiring the students while at the same time teaching us relevant creative skills related to our future as professionals.”

“One major thing I took away from this course and that will stay with me forever is the new dynamism that is needed in the workforce. I don't have to choose necessarily between biology, management and languages ... it is quite likely that there are jobs available for people involved with all three. In fact, I have found a new 'niche' of sorts and will begin my journey towards international organizations and NGOs. I was told that I must stay in science because I am not a “Management” type - “I am not conniving enough” to survive in the business world. What we have seen in class, however, is the realization by society that the kind of leaders needed are not the top-down, controlling type, but the self-sacrificing, motivated people with a vision for tomorrow. In that respect, I think I have as good a chance as anybody. I am actually very surprised at how certain I have become of my life goal in just three weeks' time, and I think that's a pretty big change! UNEP here I come!”

### 4. Assessment of learning outcomes

We have applied Schmidt-Wilk's (2010) suggestions to demonstrate evidence of student learning. First, Schmidt–Wilk recommends scholars to develop and test activities through multiple classroom iterations. In line with this suggestion, we have repeated the exercises in the courses several times and this has provided us opportunities to make improvements and refine the exercises.

Second, we have collected evidence and feedback from multiple sources over time, including students and peer faculty (Schmidt–Wilk, 2010). We have invited multiple rounds and forms of student feedback over the semester. We have asked feedback from the teaching centre of the university, which resulted in a teaching award for this course. We have also presented in several management conferences and incorporated our colleagues' feedback back into the course's new offerings.

These forms of critical review helped us identify areas of improvement and improve the transferability of exercises and pedagogical techniques.

Third, in line with Schmidt–Wilk's suggestion of collecting evidence using multiple methods, we have collected evidence using course evaluation forms, questionnaires, in-class feedback, and student reflective essays. In addition to the formal course evaluations, we have conducted an assessment of learning outcomes of the course through reflective writing exercises. Students have reflected on their learning journeys in the course discussing the issues raised as a result of their learning. We have asked the students to respond to the following questions in a short essay: What has changed in your life since you have started taking this course? What have you started doing differently since you started taking this course? What do you think you have gained and learned as a result of this course? How has this course helped you so far in your skill development? Students have submitted a reflective account of their own learning, commenting on their experiences of skill development and narrating their own learning journeys.

Finally, we have tied the learning evidence to the learning objectives of the course (Schmidt–Wilk, 2010). We matched the outcomes against the learning objectives established at the start of the course (See Table 1 for details).

The essays were analysed using content analysis guided by the procedures associated with inductive reasoning (Shaw, 2004). The process of inductive analysis involved reading the essay responses, searching for patterns and themes within the data, and using codes to organize and create meaning. Codes were then refined by the authors' understanding of forms of learning evidence. The essays provided by our students to these questions have been evaluated to be of high quality based on Scott (2010) criteria for evaluating reflective data of this nature. The essays were a) authentic (they had genuine stories and rich examples from personal life), b) credible (they reflected learning outcomes of the courses and were free from biases), c) representative (a great majority of the students demonstrated depth and quality in their reflections), and d) meaningful (they reflected the sense-making efforts and learning journeys of our students).

As the essays were content analysed, they were found to reflect a number of indicators for skill development and personal change. These indicators, listed in Table 1, were associated with learning outcomes across three dimensions. In Table 1, each indicator has been illustrated by a representative quote from the essays students have written. The content analysis of these essays demonstrated evidence for students' deeper learning, behavioural changes, and skill development.

## 5. Discussion

There have been some major challenges in implementing this pedagogy. One of them has been the ability to devote more time than is allotted for standard courses for evaluating and grading student performance as well as providing feedback and coaching for each student. This is a difficult pedagogical approach to adopt, given the institutional constraints and publication pressure imposed on management instructors. Nevertheless, instructors may consider incorporating some elements of creative, reflective, and collaborative assignments into their courses. These practices are very flexible and can be adapted to fit the specific parameters of different courses, class formats and student needs.

Another limitation of this pedagogy is that it has only been implemented as an elective course, which reduces its generalizability. It remains to be tested whether such demanding activities would work with required courses. Still, we learned about methods for better engaging less-motivated students. During the courses, some students were frustrated about the workload and the relative lack of structure. We offered them extra coaching on navigating uncertainty as well as some flexibility in managing the course load, which eased their transition in the course.

In this article, the primary focus was tailoring management education for the needs of the millennials. However, there is little reason why the practices and principles of management learning at the speed of life cannot be used for other generations whose members are also embracing technology as integral components of their lives. In our experience, the practices presented here seem to work better for learners who are open to new experiences and modes of learning, such as project-based work, teamwork, and creative art work. It is worth noting that several students dropped the courses because they felt that traditional courses with paper-and-pencil exams and more structure were more appropriate for them.

This pedagogy, based on the concept of management learning at the speed of life, has several implications for management educators: First, management learning is not confined to the spatial and temporal boundaries of the classroom in the digital age. The pedagogy of management learning at the speed of life addresses the needs of millennials through creating creative, reflective, and collaborative spaces beyond the classroom. These spaces provide students ample opportunities to experiment with relevant employable skills for their lives. Second, management learning at the speed of life can be used as a catalyst for individual growth, learning, and skill development for millennials; helping them tap into their unique potentials and capabilities for personal transformation. To achieve this, management instructors need to make a genuine effort to listen to and understand their students' customised needs and work with them to enable their progress based on these needs. Third, this paper illustrated how management instructors can provide students time, opportunity, and resources to build their own projects based on their interests and passions. Management instructors need to go beyond classroom boundaries to design powerful spaces for empowerment and high quality connections among students. They should focus on building a sustainable creative community and nurturing positive relationships to encourage learning for life. This may involve bringing together talented and motivated students from diverse disciplines and backgrounds to address selected social problems or needs. It also involves creating contexts that are highly personalized, rich in reflection experiences, flexible for experimentation, open for collaboration, and compassionate for each and every student.

**Table 1**  
Learning objectives and learning evidence.

Learning objectives across domains	Indicators of skill development and personal change	Evidence of learning and skill development (quotes illustrating consequences of learning, change in behaviors, new insights, new skills development, change in attitudes, or future behaviors)
<b>Domain:</b> Creativity <b>Learning Objective:</b> To develop lateral, non-traditional & creative thinking skills for solving problems and generating innovative ideas	Improved ability to challenge traditional ways of thinking	... After this course, I am more confident in critical and creative thinking skills. I have started questioning every assumption that does not work for common good. More importantly, I have learned how to provide constructive criticism and developmental feedback. I think these skills will help me tremendously in my career (Male, 21, Montreal)
	Creative use of minimal resources	We played many creative team games in the classroom where we made the most use of limited resources. For example, we built the highest tower using spaghetti, a sticky tape and a scissor. We are proud of what we accomplished – it was our attempt at designing and building the Eiffel Tower. The whole experience was fun, but also very engaging, immersive, and insightful. We learned about the significance of advanced planning and design thinking in every initiative and project. As a manager, you have to work with constraints, but you can turn these constraints into opportunities if you think hard. (Female, 22, London)
	Willingness to take risks for innovation	The biggest take-away from this course for me is the courage to take more risks. I have realized how fear paralyzes me and inhibits my creativity. I will no longer be afraid of failure. As long as I keep learning, failure is fine and I will welcome it in my life. (Male, 20, Istanbul) Breakthrough success is nor easy nor straightforward. Steve Jobs, Elon Musk, JK Rowling ... All role models we watched in class were successful after overcoming a lot of hardships. They took risks and followed their passions. You have to hang in there and work relentlessly. (Male, 23, London)
	Increased ability to think outside the box and generate novel ideas to solve problems	As we looked into the lives and careers of greatest minds of our time, we have also developed a diverse repertoire of toolkits. We practiced with methods of lateral and integrative thinking. We delved into the world of arts, getting inspiration from artists such as Damien Hirst or Marina Abramovic. We had a lot of experience in using design thinking as teams of entrepreneurs when we designed shoes, umbrellas, and wallets of the 21st century. I think we are well equipped to design new solutions and imagine new possibilities wherever we go after graduation (Female, 21, London).
	Willingness to break established habits and transcend own mental walls	I have changed the daily practices in my life that does not add value to my life or to my career. I no longer waste time on social media and Internet. Now, I use the Internet for learning and inspiration. I have learned how to access relevant knowledge to open up my organic café. I am taking initiative for my own learning (Male, 20, Montreal) I move towards things that are more inspiring for me. I do not use the same path to go to work anymore. I do not go to the same café or restaurant, but I try out new options. I meet new people. I travel more. I go to theatre. I have more fun. I seek more excitement in my life. (Female, 24, London).
	Embracing uncertainty & discontinuity	I was very uncomfortable with the things I have no control over. A train delay, an unexpected rain, a change in schedule ... I now treat these as gifts. I might as well enjoy them instead of being annoyed. I learned I could thrive in chaos. As I live in Istanbul, literally a jungle, I need such a positive mind-set! (Male, 22, Istanbul).
<b>Domain:</b> Reflection <b>Learning Objective:</b> To develop reflective capacities & self-awareness leading to a sense of personal calling and responsibility	Developing deeper self-awareness	I have grown to be a more reflective person after completing course activities and projects. I know my strengths and limitations as well as how they translate into my roles in the workplace. This allows me to be more proactive and assertive at work – I can choose roles or say no (Female, 21, London)
	Discovering own passions & strengths	We have had a chance to assess ourselves using a couple of inventories on our personality, values, and strengths. In particular, the flower exercise helped me to systematically consider my career choices in the light of my personal strengths. (Female, 21, Montreal).
	Being more conscious & awake at work	I've developed ways to increase my concentration at work. During early morning, I engage in reflective practices such as meditation. When I start working at my desk at 9 am, I begin with a sharp focus. I feel much more empowered and enlightened. Thanks to the reflective techniques we learned in this class, I can breathe well, sharpen my mind, and nourish my soul. (Male, 25, London).

Table 1 (continued)

Learning objectives across domains	Indicators of skill development and personal change	Evidence of learning and skill development (quotes illustrating consequences of learning, change in behaviors, new insights, new skills development, change in attitudes, or future behaviors)
	Discovering one's own calling in organization & society	I developed a service-learning project to improve the power system and infrastructure for Nigeria's Nollywood sector. The more I worked on the project for this class, the more I realized I wanted to contribute to Nigerian cinema as an entrepreneur and film producer. I want to inspire and empower Africans through the power of film. (Male, 23, London).
	Reflecting on long term implications of one's own actions	I know that some of the toolkits and theories we learned in this class are not immediately applicable. However, I know that I will use them in the long term. For example, Roger Martin's model of integrative thinking or Waddock's systemic thinking ... These models have improved my wisdom. When the time comes, I am well equipped to make informed decisions as a manager. (Female, 23, Montreal).
	Engaging in reflective practices to maintain a healthy spiritual balance	Having developed stamina and peace of mind in our reflection exercises, I feel I have a better perspective on how to live more meaningfully. I no longer spend countless hours in with my cell phone and laptop. When I am at work, I am fully at work and when I am at home, I give all my attention to my family. I do more exercise and yoga. I go to theatre, participate in music and arts events, and act as a volunteer in my community. Much more fulfilling than watching TV, that's for sure. (Male, 22, London).
	Being involved in sense-making in everyday decisions & actions	I've begun practicing mindfulness in my everyday life. I ask myself the really hard but essential questions about what is significant in my life and in my career. I question the decisions I make, the collaborations I am involved in, the projects that I contribute to, and the networks I want to be part of. I question the deeper meaning of my aspirations, my dreams, and my actions at work. (Female, 26, London).
<b>Domain:</b> Collaboration <b>Learning Objective:</b> To develop collaborative skills in team environments & to work with stakeholders for shared vision & goals	Developing interpersonal communication skills	I had a chance to practice both our oral and written communication skills in this module. There were a lot of opportunities for doing presentations, working in teams, and giving each other feedback. (Female, 21, London). I feel more confident in my abilities as a manager. I have spotted my weaknesses in communication, conflict management, and negotiation. I have developed better networking skills and started building proactive relationships with my colleagues and subordinates. (Male, 29, London).
	Increased ability to develop collaborative relationships with stakeholders	During our service-learning projects, we had numerous opportunities to work with external organizations and internal stakeholders. So, we collaborated across departments in the university system. We interviewed community organizations to find ways of adding value for poor families in the neighbourhood. The whole process was very exciting and insightful. (Female, 23, Montreal).
	Increased ability to commit to shared goals & team work	We have had a lot of experience working in teams for our projects in our class. As a team, we designed and delivered an executive training program on employability. We scripted this event in the format of an Oscar ceremony, which was great fun for us and for the whole class. I think we learned a lot on how to share tasks, work towards common goals, track our progress, and trust each other along the way. (Female, 22, London).
	Increased capacity for building empathy & compassion	As a cohort, I think we tremendously developed our interpersonal skills. As we worked together in our team projects, we learned about the factors that make a great team. We also developed positive team practices and dynamics including respecting and supporting one another, being there for each other, building high quality connections, and sharing heart-warming memories. (Male, 22, Istanbul).
	Increased ability to inspire & mobilize people	I feel I have contributed to the success of our team. I have come up with the idea of shooting an MTV-style clip and my team members loved the idea. We had a blast writing the script, dancing together, and shooting the video. It felt amazing to create and apply ideas together. I felt like a creative director. I am very proud of what we achieved together. (Female, 21, London).

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Table 1 (continued)

Learning objectives across domains	Indicators of skill development and personal change	Evidence of learning and skill development (quotes illustrating consequences of learning, change in behaviors, new insights, new skills development, change in attitudes, or future behaviors)
	Demonstrating leadership & followership to progress towards goals	I began viewing myself in the larger scheme of things. I realized I am part of the organizational ecosystem. I act as a leader in my team, but I am more like a follower in top management circles. What matters is that things are getting done and we are progressing in the right direction as an organization. (Male, 24, London).

## 6. Conclusion

This paper introduced the concept of management learning at the speed of life. Management learning at the speed of life is based on three dimensions: The first dimension is reflection, which involves searching for one's own voice and learning motivation. The second dimension is creativity, which involves a sense of wonder and curiosity, as well as courage for experimentation. The third dimension is collaborative learning, which involves a group of individuals working together in common tasks to search for understanding or solutions. This article has described providing reflective, creative, and collaborative spaces for millennials where they can develop their own portfolios. These learning spaces and portfolios create safe and playful activities, foster authentic conversations, and provide students dialogue opportunity with their peers - which will ultimately enable management learning at the speed of life.

## Appendix A. Project Descriptions

### Reflective Portfolio

*Reflection Journal:* Keep a reflection journal or blog throughout the course to share your learning and reflections about this course and yourself. Your writing may include a description of experiences, your feelings about events, self-questioning, evaluation of your progress, an honest appraisal of your experience, and links to your coursework. You can express yourself through poems, stories, pictures, or collage art. Try to draw pictures, diagrams or concept maps reflecting on your goals and dreams. Think about what inspires you, what contributions you want to make for your community, what you feel passionate about, how you learn from their mistakes, or what you want to achieve in the next decade. Alternatively, you can use *microblogging* as a platform to share your reflections above. Microblogging tools (e.g. Twitter) allow you to send and publish brief text updates, micromedia, or videos to capture and document your learning, thinking and reflection. Please use hash tags (#creativity, #collaboration, or #reflection).

### Creative Portfolio

*London Eye Project/Montreal Vision Project/Istanbul Bosphorus Project:* You will attend, participate, engage in an event based in your creative city (London, Montreal, or Istanbul). (This might be a musical event, a sports event, an artistic event, a workshop, an international festival, a field trip, a chess tournament, a quantum physics seminar, a volunteering opportunity in a hospital or more.) Select a context that you feel curious and passionate about. Build analogies and creative connections between what you have learned in this module (reflecting on relevant professional skills) and this other world/context/aspect of life. Apply interdisciplinary and creative thinking. Reflect on what unique learning and development opportunities London may offer you as a creative city. Try to find inspiring, bright, interesting, innovative, intriguing ideas. The project may involve visual, narrative, conceptual, ethnographic, multimedia or digital methods/outputs. You might also write up an ethnographic piece, a reflective editorial, or an innovative newspaper/magazine article.

*Seven I Project: Inspiration, Imagination, Insight, Integration, Inquiry, Innovation, Implementation:* In this project, try to summarize and integrate what you have learned in this module creatively and insightfully. Do this in a creative and personalized way that makes sense to you. You can create a reflection blog, an art work, a visual model, a story, a concept map, a web page, a YouTube video, a song, a journal, a book draft and outline, a multimedia CD, or more. What are you really curious and passionate about? Use your best creative skills and talents.

### Collaborative Portfolio

*Executive Training Program:* One of the best ways to learn collaborative skills is to practice, teach and apply them in professional settings. You will become actively engaged in this process by acting as executive trainers and designing executive skill development workshops. These workshops will focus on how to develop proficiency in reflective, creative, and collaborative skills. You will learn, exercise, and apply these skills in workshops and in a multinational company training

program context. The focus of the workshops will be on the application and development of these skills. You will act as Consulting/Training Companies with your teams and will teach us (rest of the class, your clients as the Executive Board) selected insights and skills. These sessions are supposed to be intense and creative workshops with multiple methods (role-play, case, video, game, team work ...) Each team will sign up for office hours to get further coaching and guidance, as well as to discuss possible team projects/teaching session proposals.

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