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Mission Statement

The mission of the *Journal of Multidisciplinary Research* is to promote excellence by providing a venue for academics, students, and practitioners to publish current and significant empirical and conceptual research in the arts; humanities; applied, natural, and social sciences; and other areas that tests, extends, or builds theory.

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Editorial

Dear Colleagues,

In her book *Think Outside the Building (How Advanced Leaders Can Change the World One Smart Innovation at a Time*, Rosabeth Moss Kanter, the famed Harvard professor stated that "If you dream, dream big, because it takes the same amount of time as dreaming small." I believe that here at the Journal we provide a global platform and opportunity for researchers to dream big.

As we view improvement as a never-ending process, we are happy to announce that the Journal was added to another database: "The Business History Conference Collective Bibliography." It helps collect, organize, and share research about business history and the business environment.

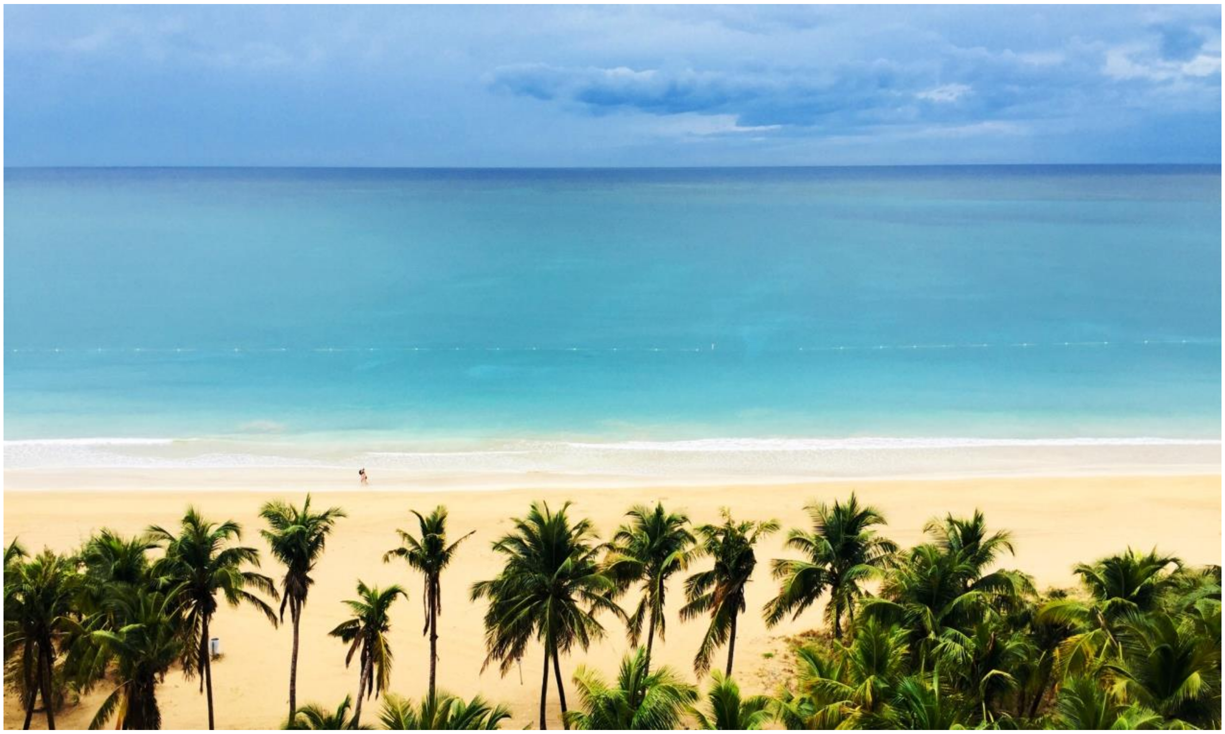
This Volume 14, Number 2, edition of the *Journal of Multidisciplinary Research* (JMR), features timely and thought-provoking research from around the world. A unique article from Yale seeks to understand the outcome of pedagogy designed to make explicit the meaning making process among future environmental experts. An interesting study from Creighton University School of Medicine evaluates technology use for community health needs. A collaborative evaluation case study from St. Thomas University and Thomas More University focuses on process improvement at a Midwest United States specialty medical practice. A timely article from Minnesota State University sheds light on the opportunities to engage urban and business students with the agriculture and food industries to address employment gaps. An article from Southern Illinois University argues that through personal discovery, first year college students can find their Raison D'être. An article from Montclair State University focuses on how to write an email and why it matters socially and professionally. An article from Florida Atlantic University explores how first-year college students can create their own competitive advantage to position themselves for a successful career trajectory. We also feature a reflection article from Neumann University discussing a way of introducing undergraduate mathematics students to partial differential equations.

We also have an interesting student article in our "Student Corner." The student investigates the different ways New Yorkers practiced recreation and leisure during the pandemic.

Finally, in this edition of the JMR, we draw your attention to the photographs spread throughout the issue, all on the theme of "W" – Water, Winds, Walls, Waves, and Winter. Enjoy!

Always forward,

Hagai Gringarten, Ph.D.
Publisher & Editor-in-Chief



"Water"
2019

Photography by Nilo Rodríguez

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A Model Integrated-Interdisciplinary Foundational Course for Environmental Science and Management Programs

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Abstract

Students want integrative, transformative courses to help them address society's pressing problems. This integrative and interdisciplinary course targeted educational needs of future environmental experts (scientists, managers, policy leaders). It was transformative for students, helping them achieve their potential (e.g., "competence in action," "ethical pragmatism"). The course encouraged *reflexivity on meaning of life/existence*, problem solving skills, and social and policy process. It taught the New Haven School of Jurisprudence at its core (i.e., the policy sciences). Clark started the course in 1990 and updated it annually. Terway co-taught the course with Clark from 2013-2016 and guided the appraisal below. Students submitted course reviews anonymously. This was our data set–we analyzed, grouped responses, and identified major themes in their appraisals. Some students had conventional expectation coming into the course, and so, the course was initially disorienting and did not meet students' conventional expectations. We reinforced students as they engaged new course materials. Last, we found that student reflexivity required substantial time and effort on the part of instructors and fellow students. The course taught students what and how to integrate among contributions from both scholarly and practical domains. In sum, our appraisal (and the course) set out to understand the outcome of pedagogy designed to make explicit the meaning-making process among future environmental experts. Some students in their appraisal noted that this is the best course they had in their graduate program. Further, many graduates who took the course 10 or more years ago, said they actively use the skillset taught in the course in their current professional roles.

Keywords

integrated, reflexive, transformative, professional development, meaning-making, critical thinking, values, interdisciplinarity, problem solving skills, contextuality, appraisal, pedagogy

Introduction

How can we help students in our colleges and universities address problems flowing from our deteriorating environment and our unfolding social, economic, and political condition? It is clear that the current and foreseeable context of our living is fraught with challenges – biophysical (e.g., climate change, extinctions), (il)liberal and (anti)democratic dynamics, and (in)security issues (at home and internationally), human (in)dignity and (in)justice, and of course surprises and unknowns (e.g., Marien, 2019; Nichols, 2021). Today, there is conflicting interest groups (vs. citizenship, society), and an overabundance of information, personal opinions, prejudices, and even falsehoods that come to fill social spaces alongside reliable information – facts (Rauch, 2021; Hanson, 2021). The rise of social media, societal fragmentation, and polarized politics are involved. The World Academy of Art and Science (WAAS) noted, "Imparting knowledge is increasingly becoming a less significant part of education. What is critical today is to teach our youth to think for themselves, recognize and account for their own as well as others' blind spots, and become values-based, independent individuals who can lead society toward greater human wellbeing" in healthy environments (Ramaathan, 2019, p. 1). We concur.

The course is about education in perspective. And, as well, it is about a deep accounting of history and a fundamental skill set beyond a simple transfer of knowledge. Recall, the historian Lynn White (1967), who asserted in "The Historical Roots of Our Ecological Crises," that our crises stem from the still-dominant axiom that "nature has no reason for existence save to serve man" (p. 1204). Here we are now, half a century since White wrote these words, and we are still largely addressing only the symptoms of problems that we created. We maintain it is time to take White's admonition that, "unless we think about fundamentals, our specific measures may produce new backlashes more serious than those they are designed to remedy" (p. 1204). Our model course dives into matters of human existence, meaning-making, self-awareness, evolution, dignity, values, and diverse social and political considerations. It enables a basic problem-solving skill set through a reflexive approach (thoughtful, empirical, analytic).

As we see it, students need to be able to orient successfully to problems and their contexts, and adroitly apply thinking, problem solving, social and decision process analysis, and much more (Daniels, 2021). Many contexts show symptoms-focused change concerns in the human-environment relationship, especially in America. Yet, descriptions, diagnosis, prescriptions, and actions for needed change are almost as numerous as their evolving qualifiers that they include: transformative, behavioral, systemic, grassroots, collaborative, stakeholders, regenerative, global, cultural, societal, social-ecologic, and the list goes on. Common to these calls, unifying them all is a shared predisposition to ameliorate problems, although motivations may be vague. They are all focused on the human-environment relation, and what it should be (Clark, 2011a, b).

This article has several aims. First, it describes this course. Second, it details the course's exercises. Third, it appraises the course. Finally, it identifies themes and makes recommendations for people in designing and offering their own similar course. We drew on Dewey (1981-1990) and Lasswell (1971), and others in designing the course. We have benefitted from more than 400 students and graduates over 30 years. Finally, our efforts are consistent with the goals of emancipatory and planetary forms of transformative learning in which people seek a "reorganization of the whole system (political, social, educational)," in part by "creating a new story from one that is dysfunctional and rooted only in technical-industrial values of Western Eurocentric culture" (Taylor, 2008, pp. 9-10).

The Course

We designed the course for students in any subfield of environmental studies or other disciplines. Its purposes were to help students improve their skills in thinking more effectively and acting more responsibly in complex management and policy cases. The course explored comprehensive and integrated (interdisciplinary) concepts and methods for thinking about problems in natural resources policy and management, and proposing solutions to them.

Our course considered the conventional context, an array of disciplinary-based, and social and political outlooks that are currently competing in the academic curricula (see Wallace & Clark, 2017; Rauch, 2021). In addition to uncovering foundational concepts at play within and across these domains, the course's approach to problem solving results in a reliable operational "map" of any natural resources policy or management system. This helps students and professionals locate the most likely sites of intervention to facilitate adaptive problem resolution, and the creation of alternative outcomes. We see that science is the pursuit and application of knowledge and understanding of the natural and social world following a systematic methodology based on evidence.

Students

The professional backgrounds of students spanned disciplines in the natural and social sciences, arts, and humanities. Their interests included land and species conservation, human-wildlife conflict resolution, environmental non-profit leadership, environmental policy and law, climate change adaptation, renewable energy, biological science, economics, communications, forestry, land management, planning, and more. Interests in taking the course ranged from wishing to learn more effective ways of problem formulation and solving, to learning how to 'do interdisciplinarity,' to assuming that the 'foundations' in the course title meant that it was to be about the fundamentals of making technical policy (e.g., laws and regulations), to hearing from former students that it was an unusual yet worthwhile learning experience.

When we ask why students took this course, they often said, to understand their past work and education experience, references from respected peers, to learn interdisciplinarity-integration, and to better understand problems for future work-selves: *This class will give me "X"* and expand my view [outward and inward]. Longer quotes included, first, "It seems as though this course confers a set of skills directly related to environmental decision-making and problem-solving, which would have been extremely helpful in my previous job." Second, "I want to have my perceptions, assumptions, and general ways of thinking about the world challenged." Third, "I really like the idea of having a core group of people within [the school] who I will get to know better in an academic setting." Fourth, "I expect to think a lot about how to think and analyze situations with an eye towards implementing effective and appropriate changes." Fifth, "One of the reasons that I am applying for this class is to acquire a skillset and thinking framework to approach environmental problems in an interdisciplinary and integrated manner." Sixth, "The main reason I am applying for this course however [*sic*] is to help me personally develop and navigate my way through an environmental career and perhaps discover my niche and how best I can contribute to solving environmental issues." Seventh, "I'm also taking this course because I want to acquire a deeper understanding of the challenges and problems in natural resources management." Eighth, "The two of you have triggered my curiosity." Ninth, "How do we ask good questions?" And tenth, "How does one 'ensure' that we spend our very limited attention, time, and resources on the most relevant issues and opportunities? As an individual, as a society and as a citizen?"

Premises

Our course is concerned with human-environment relations in considering meaning-making, its context, forms, and consequence. Following Commoner (1970), this view not only is 'everything is connected,' and so too meaning and its material form and consequence are bound together. This course introduced the foundation of human beings as a biosemiotics (symbol users), meaning-making species (Becker 1971). It asked what this means for 'environmental' managers tasked with natural resources policy and management who intervene in social-ecological systems. Also, it asks how this relates to one's own life and professional experience as an environmental expert in training. It contends that explicit recognition of the symbolic dimension of meaning and its consequence is so difficult for many people precisely because we attend and express through it, even in the most articulate, attentive, well-informed, well-designed, and well-intended efforts toward non-destructive social-ecological change.

We used the proverbial water surrounding the fish at sea to make fundamental points about our perspectives. Our perspectives are an always present feature, yet they are not necessarily an acknowledged condition of our existence. We may not recognize its (the water, our meaning-making) omnipresence simply because we cannot do without it while in communication with others or amid our own subjective symbolic thought. To see explicitly what we are doing would be analogous to asphyxiation, the equivalent of a fish out of water. And at a certain point the "fish/water" analogy becomes limited as it implies that there is a 'land' away from water — an 'away' from making meaning or at least some high-ground tempered with a more complete rationality we can strive towards — which, in this view, may not exist.

Our approach embodies transformative learning concepts in the activities we present (see Helsing et al., 2009; Kegan, 2009; Mezirow & Associates, 2000; Mezirow, 1990, 1997, 2003; Taylor, 2009). We used a communicative learning approach (Mezirow, 1990; Kitchenham, 2008) towards reflective practice (Schön, 1983, 1987). It also required the two of us to participate as co-learners in reflective and discursive activities, disclosing our own intentions and justifications to uphold epistemological accountability (Almedom et al., 2015), while practicing facilitative leadership by modeling the process with integrity (M. Taylor, 2011). All the while, we used the integrative/interdisciplinary policy sciences (i.e., the configurative approach, New Haven School of Jurisprudence (Clark, 2011; Steelman, 2016; Vogel et al., 2017; Clark & Wallace, 2015, 2018; Clark & Ashton 2004).

We drew on this premise and came to a view that required we teach transformative activities that have the potential to change views (i.e., habits of mind, Mezirow & Associates, 2000; Poutiatine, 2010; Kincheloe, 2008; Schön, 1983, 1987). It also required second-order change (a change in one's knowledge and learning ability but also the very paradigms upon which they operate). Furthermore, Kegan (2009, p. 41) specifies that the form that is undergoing transformation is about recognition and expression of: what is, what is known and how and what is valued—all within their context of being experienced (see Lasswell, 1971; Collard et al., 2015; Cox, 2018; Szerszynski, 2015).

Description

The course's goals, format, structure, and readings follow. First, the course's *purposes* were to: (1) introduce students to comprehensive and integrated (interdisciplinary) methods for thinking about and proposing solutions to problems in natural resources policy and management; (2) introduce students to fundamental concepts that underlie problems in natural resources policy and management through diverse exercises designed to enable adult development; and (3) to embody the concepts and methods we teach in the conduct of the course by creating an environment conducive to individual and collective learning (an experience).

Second, student work toward these purposes by: (1) investigating ways to improve any policy-management process; (2) providing students with an opportunity to give a lecture (a skill) on a problem in natural resource policy and management that is of personal interest; and (3) providing students with weekly individual and group exercises for application, reflection, and dialogue.

Third, we visited this question, "What is it managers imagine they manage?" The question illuminates the *concept of sustainability* in ways that may be new to students. For example, generally speaking, sustainability in policy and management is a matter of identifying, responding to, and engaging with the changing conditions that shape the local and global community and guiding them, all while engaging with others and yourself. Thus, one challenge for scholars and practitioners, and thus students, is to look for rigidities in both outlook and material conditions in any policy and management system that might inhibit transition to an adaptive, contextual, learning-oriented approach. Every discipline and perspective has something to contribute to this examination and creation of alternative ways forward.

Fourth, the course was in two parts. Part I (7+ weeks) posed and explored comprehensive and integrated methods of thinking about problems and proposed approaches to them. The instructors and guests lectured and facilitated discussion, students summarized and critiqued readings and participated in exercises, and all dialogued. Throughout, instructors asked students to bring in subject matter that illustrated the concepts, methods, and their applications, so the full class could consider them. And Part II (4+ weeks) focused on applications of the comprehensive and integrated methods that were the subject of Part I through student presentations and written exercises. This part gave students an opportunity for an in-depth application of concepts to a case of their choice. The final session brought the course to closure.

Fifth, the course was student-centered and promoted learning through doing or practicing. In Part I, we asked each student to lead, or participate, or both, in discussion of a few readings and exercises. The expectation for the rest of the students was that they participate in all discussions. Active participation was essential (20% of grade). We ask students to answer three questions concerning all readings and exercises:

1. What did you already know about the material covered?
2. What was important (if anything) that you learned from it?
3. What are the most important questions you have about it?

In Part II, each student presented a draft of his or her term paper to the class for discussion (about 0.5 to 1 hour). We gave out an outline and examples for preparing their paper (50% of grade).

Sixth, each student kept and submitted a weekly journal. Students used the journal to record their views, the discussions, and their own processing of them (30% of grade). They were to be reflective. We discussed journal entries in the first portion of each class session.

Seventh, the required reading was the following: Clark, S. G. (2011). *The policy process: A practical guide for natural resources professionals*. New Haven, CT: Yale University Press (this is the "handbook," the key reading). The course followed this book, chapter by chapter. Additional readings were available online.

Once students gained familiarity with the core concepts and methods at the heart of the course (standpoint clarification and problem orientation), they applied them to particular issues in natural resources policy and management. Each student, alone and working in groups, was responsible for researching a particular problem. We designed the course to lay the foundation for all future work and for all other policy and disciplinary courses in the program. Our course complemented, not duplicated, material in other courses in the university. The course was generally limited to about 18 students.

Appraisal and Exercises

Sixty-one students took the course over the 4 terms used in this appraisal. The maximum number of students in the course was 16. The students were young adults ranging from 23 to 35 years old, with varying professional experience, and the majority of them were from the United States. Students were in a two-year environmental master's degree program.

Appraisal

Our appraisal covers these four years (2013-2016); however, the 30-year run of the course has benefitted from continuous extensive and intensive appraisal. The appraisal here was of our offering (52 classes total). Each of the four course iterations met 13 times during the term for two hours and 50 minutes each class (147.3 hours total). We performed the appraisal work we highlighted between August 2013 and December 2016. This work complimented other extensive appraisal from the 1990s to 2013 and from 2016 to 2021 – more than 30 years' experience (e.g., Peter-Contesse et al., 2009; Clark & Wallace, 2009, 2018). Terway's (2018) 4-years appraisal forms the body of this text.

We appraised exercises that we offered. Multiple appraisals focused on how students explicitly acknowledged and explored meaning-making, including one's own (standpoint). They were of two kinds. The first were mandatory course assignments, or built into class meetings, or both. The second were additional, ungraded voluntary exercises taking place outside of class meeting time and the subject of discussion during subsequent in-class meetings. All these efforts were performed in addition to and in complement with lectures, readings, case studies, student presentations, and paper-writing we assigned to help students learn the policy sciences strain of "adaptive governance" (see Table 1 in Clark et al., 2017, for an overview of the content of this approach).

The principles Mezirow and Associates (2000) elaborated comprised the indices the author used to evaluate students' written and verbalized expressions of their processing of the course's content, premise, and practices. Written documents fell into two categories. First, we analyzed the 656 individual reflective journals submitted for weekly review as an example of non-anonymous, still-in-class and thus potentially subject to self-censoring statements. In addition to these journal entries, we also analyzed the author's notes documenting the content expressed in the 52 in-class dialogues. Second, 36 students (59%) voluntarily submitted anonymous course evaluations after completion of their respective course and before they received their grades. Anonymous evaluations contained both quantitative and qualitative data, with statements about the overall qualities and effect of the course, and future students use them, in part, in deciding which courses to take. We analyzed the anonymous, qualitative statements in these 36 evaluations. We imported the student-submitted written documents to NVivo 10 for qualitative analysis. We did not perform analysis until all four iterations of the class had completed, to not influence our assessment.

Exercises

We organized the course using diverse exercises as below. These complimented readings, discussion, and activities.

Mandatory Exercises A

A-1. Individual Reflective Journals

We asked all 61 students to write a weekly reflective journal. These were for each individual to process and express their thoughts in writing regarding prior in-class dialogue (A-5), assigned readings, course content, current events in relation to class content, professional practice and application of course content, and their personal experiencing of all. They typically ranged between 500 to 2000 words in length. Students submitted journals before each class meeting, and the author used content from them as the basis for enabling in-class dialogue among all students (A-5). We assigned a summary 'take- home' journal in the final week of each of the four iterations, asking students to reflect on three primary lessons learned from the course. Students submitted a total of 656 individual reflective journals, and the author reviewed them.

A-2. Small Groups

We randomly selected all 61 students to join a small group of 3-5 peers in the class for the duration of each term. We asked these groups to meet at least once a week in person for 1.5 to 2 hours outside of class to reflect on and share thoughts regarding all course content and practices to date, as well as their relation with current events, personal, and professional experience. We did not document formally small group conversations, but students periodically raised some of their outcomes during in-class dialogue (A-5).

A-3. Mind Mapping

We asked all 61 students to draw a response to the question "In your view, what do environmental managers 'manage,' and where are you in relation to 'it?'" during the first meeting in each of the four course iterations (see Figure 1). We then posted these drawings for group discussion among all students in each class to explore the range of ways people think about themselves and 'environmental' issues, and to introduce the idea that human beings think, express, and communicate symbolically to make meaning about material matters.

Figure 1

Examples of student mind maps in response to the question: "In your view, what do environmental managers 'manage', and where are you in relation to 'it?'"

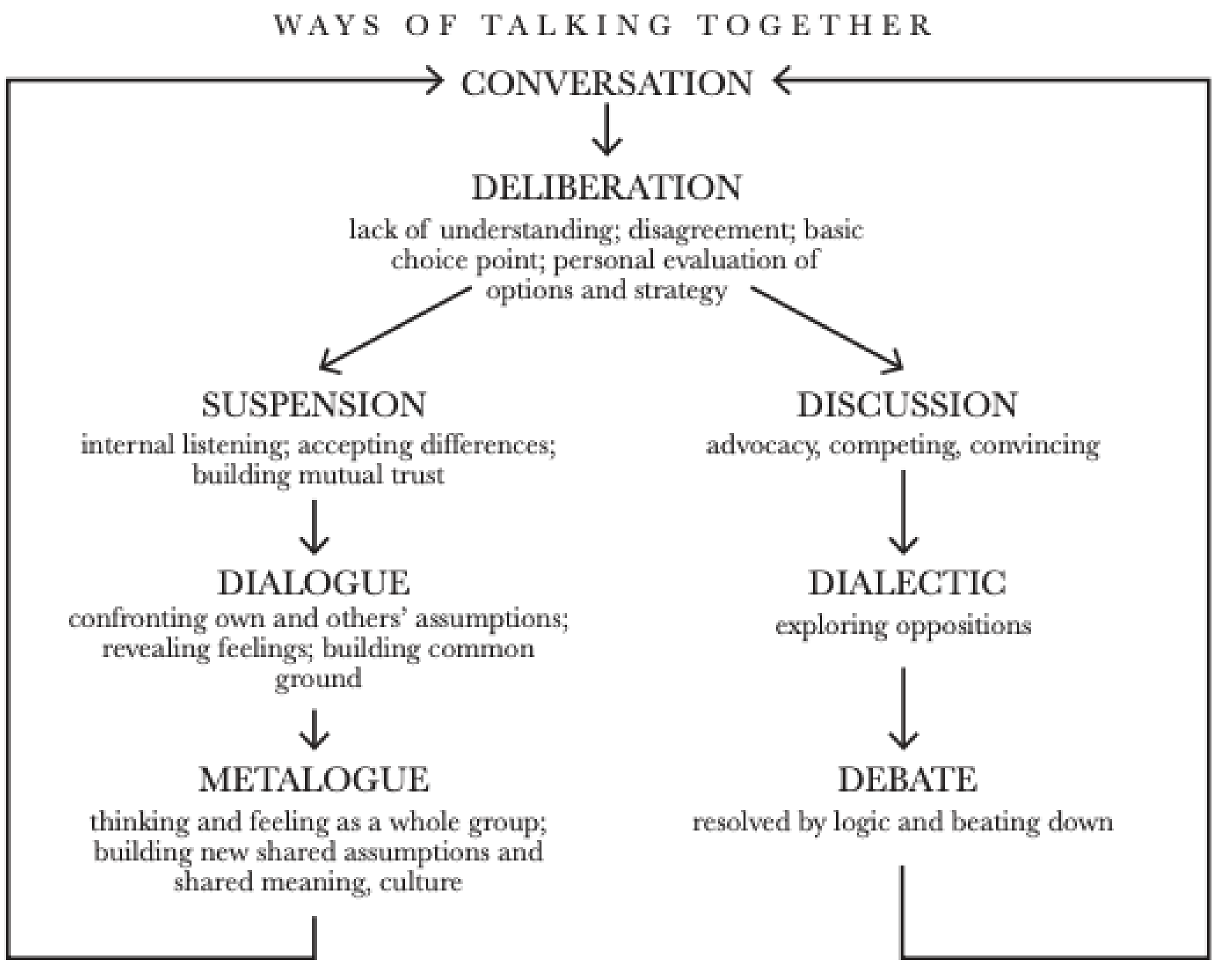
A-4. Standpoint Clarification

We asked all 61 students to clarify their standpoint within a weekly journal entry during the midway point of each term, which then became a focus of one particular in- class dialogue (A-5). Following Clark (2011) and Clark et al. (2017), standpoint clarification includes answering questions such as the following: what roles do you and other people play in the project of interest? What problem-solving tasks do you carry out when performing your roles? Do you help set goals, determine trends, analyze the conditions that underlie/overshadow the trends, project trends into the future, or invent and evaluate alternatives? What factors shape how you carry out your roles and tasks, be they cultural, of personal interest and value, from disciplinary training, etc.? Which roles or problem-solving approaches are you attracted to in the first-place? Are not attracted to? Why? Answers to these questions help make explicit the ways that students (and people in general) make meaning and from what assumptions, and their bearing on interventions in social-ecological systems.

A-5. In-Class Dialogue

We structured each classroom meeting with at least one hour of dialogue among students as peers, with the instructors participating as facilitative co-learners and guiding. The author used content that the reflective journals, case studies, current events, scholarship, professional practice, previous sessions, and more raised – to generate conversation in the vein of suspension-dialogue-metalogue as visible in Figure 2.

Figure 2
Ways of Talking Together: Dialogue and Dialectic, adapted from Schein (1993).



This 'way of talking together' in groups is based on work in collective, emergent, and organizational learning (e.g., see Bohm et al., 1991; Bohm, 1996; Kofman & Senge, 1993;

Kuepers, 2011; Schein, 1993, 2017; Selby, 2007; Taylor, 2011). While efforts to reach dialogue, as opposed to discussion-dialectic-debate, were not always successful, attempts allowed the individual and collective processing of difficult meaning relative to existing and evolving positions and assumptions, including the author's processing of how to effectively enable such explicit attention to meaning-making in an educational environment. In short, dialogue is intended to address why people have problems understanding each other by exploring how "we are all culturally overtrained not only to think in terms of certain consensually validated categories but also to withhold information that would in any way threaten the current 'social order'" (Schein, 1993, p. 41).

Voluntary Exercises B

B-1. Our Occurring World

We offered students in three of the four iterations of the course (2014, 2015, 2016; 45 students total) to voluntarily participate in an outside-of-class interview exercise titled "our occurring world." Designed on the premise that how we see ourselves may not be how we occur to others, students were invited to talk (ideally in-person) with up to five important people in their lives about their relationship with each other, in ways and about matters that may not have been previously spoken between them. Students were asked to preface the interviews by stating that they are seeking entirely honest (if difficult) responses, that responses would not be taken personally or held against them, and instead the goal was to listen by adding nothing, which may strengthen their relationship by expressing and acknowledging things unspoken. We provided sample questions to students, including the following: What are my strengths? What are my weaknesses? What is something everyone knows about me? What can people count on me for? What can people never count on me for? What is something you have always wanted to say to me but never have that would make a difference for me? Is there anything we need to clean up? What do people say about me when I am not around? What reputation do I have in this community? What do I represent in this community? Are my actions and my speaking in sync?

After thanking interviewees and following up with them as they saw fit, we asked students to reflect on what came up for them in these conversations. The author did not ask students to report specific content of the interviews but rather what they learned from the experience, if anything. We invited participating students to answer the following questions in their journals (A-1): What was not surprising? What was? What caught you off-guard? What angered you? Pleased you? Does the 'reality' of you occur to those you spoke with in the same way that you think you do? If not, how do they differ? 45 students volunteered to participate in this exercise.

B-2. Our World of Listening

We offered students in three of the four iterations of the course (2014, 2015, 2016; 45 students total) to voluntarily participate in an outside-of-class interview exercise titled "our world of listening." We offered this after the "our occurring world" (B-1) exercise, and we scheduled this over 'fall break' that overlaps with the Thanksgiving Day holiday in the United States. Built on the premise that one person may say X, a second person hears X + Y or simply Y outright, we invited students to engage in a 'difficult' conversation with someone about an issue in which they have had problems talking about with them or others in the past, be it about environmental issues, politics, current events, their own work, or more. The purpose of the conversation was not to 'win,' to change their interlocutors mind, to offend, be disruptive, disrespectful, or to change anything, but rather to pay attention to their own listening and thinking as they were engaged in talking about this difficult issue.

Students were then invited to reflect in their journals (A-1) on what was coming up for them during the conversation, how it may have been influencing their thoughts, speaking, body language, and the response in the person with whom they were speaking. They were also invited to reflect on why that may have been coming up for them, in which other areas it may also be present, what alternatives there may be for engaging in such a difficult conversation, and for overcoming any limitations of what may have arisen. Last, if the conversation turned out to be not difficult, we invited students to reflect on what was present to enable such ease of dialogue, with what effects, and how might they create an environment of such ease elsewhere. While some students wrote about this exercise in their journals and raised it in ensuing in-class dialogues, it is unclear exactly how many voluntarily participated in this exercise.

B-3. Subject-Object Interview

We offered students in two of the four iterations of the course (2014, 2015; 30 students total) to participate voluntarily in an outside-of-class interview with the author known as a 'subject-object' interview (see Lahey et al., 2011, for procedure; Kegan et al., 1982, for origins; and Kegan et al. 1982, Kegan & Lahey, 2009, for context). We use a subject-object interview to assess an individual's unselfconscious epistemology or 'principle of meaning-coherence,' and in relation with five increasingly complex epistemologies scholars believe evolve in sequence with adult development, with each successive epistemology containing the last. We intended this interview to explore more deeply any relations between the (social)-ecological concerns students enrolled in the class held and their stage of adult development, which would have implications for conceptions of social-ecological change as well as education and policy recommendations intended for enabling such change. A total of 18 students volunteered to participate, and we conducted 41 hours of interviews. The university's institutional review board approved all subject-object interviews, and we conducted all of them in compliance with the university's institutional review board policies on human subjects research.

Taken together, all eight exercises reflect our attempt to apply and embody "core elements that frame a transformative approach to teaching" (E. Taylor, 2009, p. 4). This involves explicit attention to individual experience, critical reflection, critical dialogue, a holistic orientation, an awareness of context, and authentic practice (M. Taylor, 2011; Clark, submitted). These limitations include, first, assuming that what is to be learned is 'outside' us. Second, that knowledge is best generated in controlled settings independent of practice. Third, that knowledge has to be codified (e.g., written, spoken, visualized) before it can be disseminated. Fourth, that knowledge and skill are discrete entities that can be transferred from one person to another. Fifth, that learning occurs through sensory observation, or assimilation of information, or both. Sixth, that learning is largely headwork. Seventh, that subject matter can be transferred in the same way to all learners in all settings. Eighth, that knowledge and skill are 'added to the learner from outside' without changing anything else about the learner or teacher. And ninth, that institutional authorities or experts are those best qualified to determine what should be learned.

Results

Our applied research results below convey findings and lessons learned from our attempt to explicitly acknowledge and engage the symbolic dimension of meaning and transformation in teaching graduate-level courses for future environmental experts.

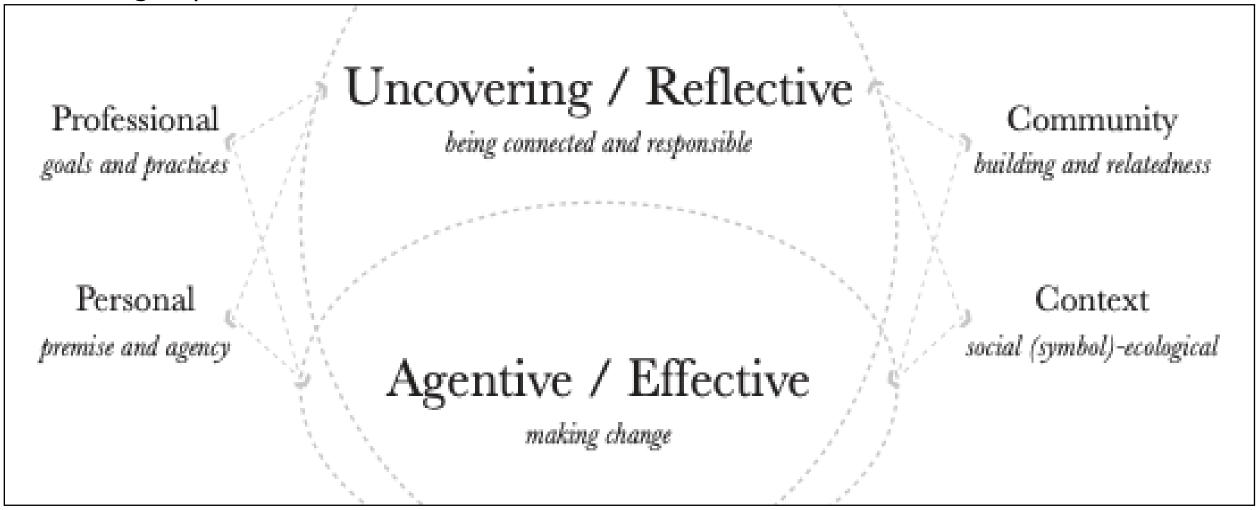
Themes

Themes appeared across all the exercises and submitted materials in response to the course. These themes are not mutually exclusive and often were apparent simultaneously in different responses from the same student (see Figure 3). First, an 'agentive/effective' orientation involves the perceived gaining of a proverbial 'bigger hammer' by which to affect change after completing the course. Second, an 'uncovering/reflective' orientation also involves a perceived gaining of knowledge and skill, but this theme is more concerned with the responsibility of wielding an expanded understanding in action, in ways that are sensitive to others in context, and one's agency and interaction among these matters.

Each theme represented ways of navigating tension between perceived opposites (and incommensurability, conflict) given the new experiences the course offered: between acting/doing and thinking/reflecting; between knowing/being committed and not knowing/being open; between talking and listening; between past expectations, demands, identifications, and new ones; between an old 'self' and a new 'self;' between 'self' and 'other'; and between hope and despair given a context of normalized social-ecological disintegration.

Examples of these two major themes had representation in subthemes pertaining to professional goals and practices, personal premises and agency, community building and relatedness, and broader social (symbol)-ecological context. We present examples of each of these subthemes below with student statements from the 'take-home' individual reflective journals students submitted at the end of each course iteration.

Figure 3
Major themes in student responses to making explicit meaning-making: Agentive/Effective and Uncovering/Reflective orientations.



Professional Goals and Practices

Students expressed changes in professional purpose, assumptions, and practices in response to the course experience. These expressions largely represented an elaboration of an existing frame of reference, or the learning of a new frame of reference, or both. These are two indices Mezirow and Associates (2000) cite as signals of transformative learning. The following statements are representative of such considerations:

> This class has challenged my ideas of what I believed to be my place in the professional world. Although I applied to [the school] with clear career objectives, I appreciate that this class has changed those objectives and, in a strange way, made them both more nebulous and concrete. *Student 14*

> I have refined my sense of professional purpose and my vision for the future. *Student 1*
> This course has helped me sort out and better understand my place in natural resource challenges. *Student 53*

> This class has caused me to seriously reconsider the role of an environmental manager. *Student 21*

> Our mission to "do good" in the world is a continual discovery of ourselves. *Student 24*

Personal Premise and Agency

The students also expressed changes in the premises one holds as well as one's sense of agency. These statements often reflect the transformation of points of view and transformation of habits of mind indices associated with transformative learning. In some particular instances, one's ethico-onto-epistemological 'form' set to 'transform' was partially elaborated. For example:

> The "Our Occurring World" and Thanksgiving exercises were delightfully challenging and powerful, and I think I will carry the results of them with me for some time…. This is where some of the power lies in this class: [in it] we strive to understand our own biases and tendencies as individuals, rather than suppress or attempt to ignore them. *Student 29*
> I entered this class as an environmentalist and scientist, fought desperately to preserve the purity of those labels, and am happily leaving without them. What those labels signify is still a part of me, but my absolute adherence to living by them was not productive. *Student 6*

> One major take home lesson from this course has been a lot about how to listen in ways that I didn't listen as well before. *Student 7*

> A final take-home is the presently vaguely articulated but deeply felt realization that personal growth and professional growth are not necessarily discrete processes.... By the semester's end, thanks to exercises like the Occurring World, Subject Object Test, and Thanksgiving Listening project, it had become very clear that the distinction between personal and professional in terms of the application of lessons learned in the attempt to do good in the world is a blurry one. *Student 41*

Community Building and Relatedness

Students often expressed an awareness and sensitivity to the peer community in which the course experience unfolded. These statements often represented what Poutiatine (2010) has identified as transformation having to involve all aspects of an individual or organization's life, the broadening of the scope of worldview, and a movement towards a greater integrity of identity—a movement toward wholeness. For example:

> I am humbled and inspired by my classmates. From the start, they have been open, honest, forthright, encouraging, engaging, willing to be vulnerable, and supportive of other's vulnerabilities. *Student 2*

> I truly gained a lot from the confidence that we all developed as a team. *Student 8*

> One of my favorite things to do in class was to watch how people physically reacted (or didn't) to what's being said. I search their faces for emotions, their body language for ease or discomfort…This class has been a good lesson in observing whether a space with inclusive and transformative learning values can put them into practice. *Student 28*

> There is nothing as valuable as having two people that actually listen and talk about life in general, not just in academic terms but [in those that] actually encourage and foster dialogue for their students in all sorts of conversations which challenge us in both professional and personal ways. *Student 52*

> The most important take-home from this course was the realization that my expectations about how I relate to peers and teachers were impacting the way I absorbed, processed, and applied (or chose not to apply) the concepts I had come to school to master. *Student 41*

Social (Symbol)-Ecological Context

Some students expressed how the local experiences of the course pertain to a broader context in which they/we participate. These statements express a recognized importance of how oneself is situated in society with its qualities and contours, and what a meaning-as-immanent view that makes explicit the symbolic dimension of meaning portends for us as individuals considering social (symbol)-ecological change. For example:

> Reality…Understanding that we can't separate the observer and the observed and that reality is contingent upon experience I think is a helpful concept in developing empathy and respect, and understanding how to begin a dialogue towards reaching a solution in the common interest. I remind myself of these concepts in particular when I think about the political divide we will need to bridge in the next administration. *Student 55*

> Having a vision is vital. The vision can be flexible, and ever-changing, but being able to articulate an idea about what the future could look like is really important. Many of my classmates are concerned with making change after their master's programs are finished. We often want to change things, but we don't have a common understanding of what we hope to build. Among us students we don't have many conversations about the sort of societal systems we want to create, we just know that it has to be different. It seems we know what elements of our economic system we'd like to see completely transformed, but we don't have the faintest notion of why or what we would want in its place. *Student 17*

> My last word in this journal is probably that this class raises more questions than it provided answers for me—but I feel strongly that I am asking better questions because of it, and that's the first step toward arriving at better answers. *Student 27*

> If nothing else, this class has taught me to look at things differently when considering issues in the future, more broadly and inclusively. *Student 50*

New Orientations in Course Reviews

Statements from anonymously submitted course reviews display what was opened up for some students upon completion. In particular, some responses expressed examples of the 'uncovering/reflective' orientation toward a heightened sense of responsibility in action (given what appears to be an understanding of matter-meaning continuity). Instead of abiding by the implied understanding of educational value as captured in institutional assessment questions such as "discuss how this course fits into your overall program" and "did the knowledge/skills that you gained from the course meet your expectations," some responses suggested alternative considerations. For example:

> It's more about how to think, rather than what to think.

> I would say that rather than this course "fitting" into my "overall program," this course has shined a new light on it and may lead me in new directions.
>
> The above questions don't really capture the value of this course. The readings were great, the discussion was great, the instructors were great. But what we were able to do and talk about in that space was unique. No other course in [this school] really lets you do what we were able to in this course. We (instructors and students alike) were exploring and trying to understand how to be in the world. It sounds out there, but that's what's missing in most classes. Most courses claim to give you 'tools' or 'knowledge' that will somehow help you do things, and yet students leave the course feeling that it somehow fell flat or didn't fulfill expectations. No other course helps you explore how things are in the world and how you can or should be about it.
>
> This course doesn't have a simple output of "skills and/or knowledge."

Other Considerations

There were and are numerous limitations to pedagogy designed and carried out to explicitly attend to and reflect on meaning-making, and particularly in the context of 'environmental' education. The following statements from the course reviews provide examples:

> I didn't feel like I really understood the angle of the class until the third or fourth meeting.
>
> If I had to come up with a weakness, it may be that students were so eager to get positively reinforced by [the instructors] that they may have not been as self-reflective as they could have been. I don't know how [the instructors] could change this.
>
> I liked the idea of it a lot more than actually doing it.
>
> Do it, but only if you're prepared to challenge yourself. It's not worth doing if you aren't open to questioning your beliefs and re-visiting your own experience. The class thrives when everyone participates and engages.

Several overall results include the following. First, the course presented a disorienting dilemma to students with conventional expectations of immediate clarity of structure, or orientations toward the obvious 'practical,' or both—whether by disciplinary background, acculturation, or learning style. A handful of students made the paraphrased statement that 'I didn't understand the class right away.' Accepting the view of the course that 'theory' (as what is consciously and unselfconsciously in one's head) and 'practice' is a false dichotomy, and the specific ways the course attempted to embody that view were likely not clarified until they were experienced. Lack of clarity also could have been due to the instructor's teaching, communication, disposition, or failure to clearly embody standards that others were expecting to be held to, or both.

Second, and along those lines, the statement that "students were so eager to get positively reinforced by [the instructors] that they may have not been as self-reflective as they could have been" clarifies one potential limitation of the course's pedagogy. There is a fine yet unclear line between flattery-performance and authentic participation when students know that being courageous in exploring and disclosing difficult matters is what is being practiced in the class. There is little ability for others to know truly if what one offers is genuine. And there is no guarantee that someone could not themselves lose sight of what might have been exaggerated and what was not. In short, practicing authenticity is hard, and especially in a culture in which being vulnerable is typically seen (mistakenly, we would add) as a sign of 'weakness.'

Third, 'getting something' from the course requires substantial time and effort, is possibly enabled (or restricted) by a participant's relative privileges or affordances which are likely not uniformly shared, and is subject to a prevalence of supportive social and material conditions. Without all these factors in place, it may be that much more difficult to be "open to questioning your beliefs and re-visiting your own experience"—in other words, "actually doing it." Again, the course was in part intended to explore what is possible when such factors are largely in place. Instituting them elsewhere for as many people as possible, thus, arguably takes precedence over considering such acts in places where they already exist.

Discussion

We sought transformational learning experiences in our course. Our appraisal set out to understand the outcomes of pedagogy designed to make explicit meaning-making among future environmental experts. Findings seem consistent with prior research cited above. A first point of alignment is that the creation of conditions that are not only explicit about the symbolic dimension of meaning in the abstract but also are conducive to exploring its personal generation, experiencing, and effects—otherwise called transformative learning—may bring about shifts in one's perspective. In using such an approach, we found evidence of openness and change—an expansion of what is deemed of value, what is known, and even what is—within locally supportive conditions. This is not a new or even noteworthy finding.

What is potentially new and noteworthy is what occurs when one considers this approach and its results along with how the observed, conventional professional environmental experts typically talk and act about 'social-ecological change.' They do so within the conditions that said social-ecological systems are currently in and are projected to face. Our dire state of aggregate biophysical affairs presently is perhaps most dramatically represented in climate change. In short, this symptomatic macro-conditioning factor is now of such a scale and consequence that it arguably eclipses a locality's ability to produce actions that would lessen its severity, such as the amount of projected-to-be-experienced sea level rise (see USGCRP, 2017, and the Fourth National Climate Assessment, 2018, and more recent documents).

Moreover, these conditions are symptomatic of a particular way of life and its upholding structures of power that contend to be 'non-negotiable.' What remains locally available are efforts to adapt. Yet, a radical adaptation scaled to the risk is restricted by these places' need to play by the rules and habits of consumption and profit growth that contribute to their peril in the first place. The meaning they carry appears to be too strong for too many people to change. And, if by chance it is not within a locality (see Howe et al., (2015), it is too strong at some larger, more influential scale—say national political philosophy, corporate interest, monetary policy in the US, or money itself—that may not be within direct or immediate access.

This particular contradiction is one the professional environmental expert is left to square in words and thought. Whereas some people may do so by pinning hopes on engineered or technological salvation (often subject to the same growth demands that require yet more resource extraction and use) or the magic of markets, such that current lifestyles can continue with relative ease and comfort (for some), others see that drastic—'transformational'—change would need to happen in order to avoid (or at least minimize) catastrophe. We authors are in this latter group and are left to thread the needle of not sounding too 'pessimistic,' while not diluting the scope of what is at stake. We also are left largely to do the best with what we have at such local and regional scales.

It is here that a second point of alignment between the findings of this study and prior research appears. Kegan (2009), quoted above, highlights the allure of a powerful concept. In this case, it is the appeal of 'resilience,' of 'regenerative' and its relative 'transformation,' which we have observed "begins to refer to any kind of change or process at all" (p. 41). Our observations suggest that when we have good intentions and strong knowledge and simultaneously do not have recourse to levers of change that are scaled to actually alter localized mindsets and conditions, we are then subject to making the meaning of our concepts "distorted, [their] distinct ideas lost" (p. 41). We also suggest that this meaning change is worsened when such activities in its name are motivated by personal achievement, power, control, and status-seeking behavior, which require the instrumentalizing of other people at a time when their sensitivities are heightened due to the experience of such treatment through societal conditions. And, this might bring a backlash large enough to negate the effort and its justifications.

This brings us back to the findings of this study, and a third and final point of alignment with past and concurrent research. This work shows that it takes tremendous effort on behalf of students and teachers alike to acknowledge largely unselfconscious factors that bear on our being in the world; on our conceptions of 'problems' and 'solutions' and their address; on our interactions with others; and on the meaning we make.

In contemporary US higher education, and specifically programs in environmental studies and sciences, there is currently ongoing debate over long-standing rifts between 'disciplinary' and 'interdisciplinary' approaches to a learning that is relevant to the context of social-ecological peril (e.g., Clark et al., 2011a, 2011b; Proctor, 2015; Wallace & Clark, 2018). Meanwhile, the academy itself assimilates mindsets and conditions prevalent in society, such as neoliberalism (Berg et al., 2016; Castree, 2010; Giroux, 2002, 2014) and its practices and effects (Fletcher & Büscher, 2017; Büscher & Fletcher, 2017; Wallace & Clark, 2017, 2018). If, as Foster (2017) contends, the "Long Ecological Revolution…constitutes the entire meaning of revolution in our time," then we recommend that the pedagogical approach to learning documented here and those like it become normalized in an attempt to overcome the hardening of our perspectives brought on by the very social-ecological order in need of being transcended.

This is a marked departure from conventional 'environmental,' and even many conceptions of the 'social-ecological' that now dominate the academy. While it is unclear if such an approach and the change it may invite can occur within unsupportive conditions, such a change in our perspectives is arguably required to alter them to something conducive to living with modest means, yet a wealth of human dignity, all in a flourishing environment. We suggest that our work on these deeply constitutive matters—personal and professional—must include, yet transcend, parallel efforts that work within technical and political domains.

Conclusion

Our interests and work in and out of the classroom, and in applied practice, led us to our course, educational approach, and the content we reported above. Our suggestion is to normalize "reflective practice" as embodied in our course, as we teach it in our academic settings and outside in workshops and applied cases. We teach for reflection and inquiry into what constitutes 'professional environmental expertise.' We question how we might improve professional practice for service to society. Reflective practice may soon become a paramount need given the real prospect of our collective failure to bring about a revolution in mind, action, and relations, and in the little time we have to do so, to minimize social-ecological disintegration, now well underway. If we humans are unable to overcome destructive forces now in motion, we will have to bear the consequences. At some point, this perspective may no longer be relevant as conditions descend to a tipping point downward. Time is short. However, what remains are the needs of authentic human connection with each other and the places in which we live. This is about humility and commitment to thinking and being different (from convention) in the world than at present. It requires transformation. Our educational work reported in this article was one attempt to foster these attributes, skills, and perspectives. There may be 'no away' from our environment and each other, but we can choose to be open to our own standpoint, awareness, and knowledge and skills. This course can be useful for someone else as a guide or design of his or her own course. We do recognize that our experience figured in the course design and its delivery.

In closing, we continue to get appraisals from graduates, for example, including the following: First, a current high-ranking Environmental Protection Agency official said, "Your courses were so important for me after graduation…they have served as a roadmap in my decision making in life." Second, a university professor said, **"**Your 'foundations' course was the best course that I took at [Yale], I use it all the time." Third, an applied international ecologist said, "I thank you every day for all you taught me." And, fourth, a former undergraduate now at Oxford University going on to Yale's Law School said, "perhaps the greatest gift of [the course] is that I now feel more competent and equipped to address the complex challenges we face, so I find myself excited, not anxious, about what the future holds." The course apparently has impact. Yet, it is not for everyone. In the end, our teaching is about our responsibility.

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Discussion Questions

1. What do environmental professional need to know to address today's pressing problems?

2. What is transformative education?

3. How does a professional transform himself or herself into the kind of practitioner called for in this article?

To Cite this Article

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Technology Use for Community Health Needs Assessment (CHNA): A Pilot Community Initiative in the Dominican Republic (DR)

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Abstract

Community Health Needs Assessments (CHNAs) in rural communities are typically conducted using paper surveillance. The purpose of this project was to implement tablet technology and train local community health promoters to streamline CHNA data collection in the DR communities served by a medical mission. A local information technology (IT) consultant developed software. Researchers recorded observations from training of health promoters and college students during project implementation. Twelve health promoters and local college students trained on the use of tablets and conducting CHNAs. Generational gaps in IT literacy, learning, and communication styles varied. Insufficient access to WiFi and inefficient implementation by trainees resulted in unreliable data. Outcomes were mixed and highlighted the need for continued troubleshooting. Improving effort to bridge the educational and digital gap among trainees requires authentic ownership of CHNAs among global health partners

Keywords

assessment, community, technology, training, health

Introduction

We live in a digital world where telemedicine enables healthcare administration, enhanced since the pandemic's 2020 onset. But in some communities, limited digital resources only exacerbate their healthcare and educational inequities. For example, rural communities in the Dominican Republic (DR) have limited WiFi access in clinics and individual homes. More systematic improvement would eliminate disparities between rural, low-income communities and more affluent counterparts (Kim, 2020).

Researchers piloted community health needs assessments (CHNAs - Phase 1) in two rural DR communities (Kelly & Nolt, 2019). The Institute for Latin American Concern (ILAC)/Centro de Educación para la Salud Integral (CESI) provides their health services. ILAC/CESI is a Creighton University affiliate, a not-for-profit organization providing medical, dental, and agricultural assistance to 160 rural communities. ILAC/CESI developed a program of community health workers (*cooperadores de salud*) who liaison with ILAC/CESI for communities' needs (Mission ILAC, 2022). CHNAs assess chronic and communicable disease incidence and prevalence, housing and nutritional needs and other social determinants of health every two or three years (U.S. Centers for Disease Control and Prevention, 2022). The ILAC(CESI) mission includes addressing community needs.

Historically, rural paper and pen surveys created capacity (Bezuidenhout et al., 2017) to analyze and interpret these data and translate findings into actionable responses. The present assessment employed current technology. Thus, the community health needs assessment with technology (CHNA-T) project provided real-time data storage and organization within a tailored database. The research team believed that technically trained ILAC/CESI health promoters, as community leaders, would best serve the project's future, adding ILAC/CESI volunteers and community partners.

Methods

A preliminary step provided infrastructure for CHNA-Phase 2. Creighton University funded the research team's proposal to purchase 10 tablets for staff and community leaders with ILAC/CESI (Haddix Research Fund, 2022). ILAC/CESI then engaged a technology consultant to independently develop a database and software for tablets data collection during CHNA-T implementation.

The research team reviewed and revised the survey tool after ILAC/CESI staff input. In earlier data collection, ILAC/CESI employed a shortened version of the research team's original tool. To be consistent in the data collection during the project's second phase, the team revised the tool to match expected outcomes more closely and the lived experience of conducting CHNAs in their ILAC/CESI communities.

The independent technology consultant next uploaded the survey tool to the tablets, adding ILAC/CESI process features to meet stakeholder needs. An example is the technical ability to photograph the surveyed house and label that home to facilitate later needs identification.

Community survey teams paired an ILAC/CESI health promoter and one or two local college student volunteers for ambulatory house-by-house surveys. Research team faculty shadowed various survey teams throughout project implementation to ensure protocol adherence, boost chances of successful technology testing, foster clean data collection. The project had successes and faced many challenges.

Results

The project trained 12 ILAC/CESI health promoters and local college students to use the technology. Research leaders emphasized role-playing scenarios using the technical CHNA survey instrument. However, WiFi problems limited community applications. The technology did not allow alternative data capture on a hard drive (the planned workaround). All 10 tablets sometimes failed to transmit data through WiFi to the home office or the hard drive. Thus, the research team reinstated paper surveillance while troubleshooting with database administrators at the ILAC/CESI center.

ILAC/CESI health promoters and college students were more comfortable using the survey paper version and electronic version, respectively. College student trainees were impatient, rushing through survey administration. In contrast, ILAC/CESI health promoters were unhurried. Students' occasional curtness and brevity, and failure to clarify participant questions. generated confusion or distrust. Health promoters adjusted communication styles as needed, eliciting more substantive responses.

Discussion

More structured and longer training would have eliminated many project challenges. The research team judged that collaborating with local college students would foster sustainability. But the team did not predict challenges that generational gaps in education and communication styles would pose. Health promoters were generally older and less educated than the college students. College students were more digitally savvy, facilitating tablets use. Health promoters rarely, if ever, used technology, but were enthusiastic about learning.

The training plan envisioned uniform implementation. However, these generational challenges required adaptation. The training included survey conduct strategies, survey question review, how to overcome challenges with questions, importance of body language and facial expressions, overcoming barriers, and step-by-step technology introduction. This last component required the most adaptation, given variable lived experiences. Participants also role-played being a surveyor and responder to the survey.

Ongoing training should be required for anyone conducting community health needs assessment surveys. Regardless of qualifications and age, effective survey administration requires knowledge of best practices: when to reiterate questions, understanding the person being surveyed, body language, facial expressions, and more. Further, survey personnel should ask questions consistently. A trained team leader should support surveyors. Feedback should be responsive to field observations. Health promoters, generally, may primarily need more training on the survey tool. Understanding each survey question, and its value for organizational planning, may help create buy-in. ILAC/CESI – or any organization that conducts CHNAs – administrative staff should be trained on all project aspects to understand and support such efforts. Untrained volunteers with limited qualifications and experience cannot maintain project integrity for the long-term strategy of conducting CHNAs every two to three years.

Conclusions

In communities, technologically facilitated community health needs assessments pose advantages and challenges. Initial training for paper surveillance may be prudent since surveyors' communication styles and digital capacities vary. Technology can then be phased in. How to involve CHNAs in data collection requires careful planning long before implementation. Insufficient training risks invalid or unreliable outcomes data. Further, initially assessing WiFi availability in homes and communities is necessary to understand the material project needs. Paper surveillance may be necessary, should electronic data collection fail. If paper surveillance, a plan for manual data entry by a trained individual should be in place to avoid interrupting the CHNA timeline of every two or three years, including data analysis and interpretation. Communities benefit from these assessments. Collaborative efforts can overcome many inequities, particularly access to healthcare, through careful planning and CHNA implementation.

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Discussion Questions

1. What role should a multidisciplinary team of professionals play in analyzing and interpreting data from a CHNA?

2. Who should be on multidisciplinary team to address the social determinants of health revealed as priority issues from a CHNA? Who decides this?

3. What suggestions would you have to communities about overcoming the challenges related to the digital divide in communities that have poor access to Wifi or no access at all?

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2016

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Healthcare Process Improvement Initiative Catalyzes Unintended Positive Consequences: An Evaluation Case Study

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Abstract

An After-Action Review of Mobile Charge Capture (MCC) (an electronic health record management tool that addresses billing, scheduling, and coding practices) software, post implementation, was the foundation of this "evaluation case" study that focused on process improvement (PI) at a Midwest United States specialty medical practice ("the practice"). Outcomes, influenced by the SARS-CoV-2 pandemic (COVID-19), confirmed substantial operational improvement from MCC activation and generated unintended positive consequences. The MCC *Improved Process* facilitated billing and scheduling continuity that cultivated a readiness for the nimble pivot to virtual healthcare delivery. Culture emerged as a key factor in organizational change; with additional PI opportunities identified for further study and consideration.

Key Takeaways included the following.

- After-Action Review (AAR) use for project de-briefing uncovered unforeseen benefits and potential organizational improvement opportunities.
- Leadership from a physician-champion provided credibility and improved clinically related change process outcomes.
- Intentional and proactive PI strategies mitigated risk, improved organizational resilience, and ameliorated potential business interruption.
- Cultural acceptance of change and an operational pivot were much easier with the recognition that organizational survival was at stake.

Keywords

After Action Review (AAR), COVID-19 Pandemic Paradox, DMAIC (Define, Measure, Analyze, Improve, and Control), Lean Six Sigma (LSS), Mobile Charge Capture (MCC), process improvement (PI), unintended positive consequences.

Introduction

To manage one must lead. To lead, one must understand the work
that he and his people are responsible for.

– W. Edwards Deming

The Context

The 17 providers at the practice serve 12 sites, an Ambulatory Surgery Center, and 31 dialysis centers around a 90-mile radius of the practice central office. The practice joined a large regional group ("the region") in late 2019, establishing the largest independent sub-specialty practice in the United States. COVID-19 affected this study and created a crucible that caused disruption to all global walks of life. Amina J. Mohammed, UN Deputy-Secretary-General, labeled COVID-19 a public health emergency of international concern and "… a human crisis unlike any we have experienced" that placed the collective global "social fabric and cohesion under stress" (Alessi, 2020, para. 1). Unexpected outcomes from this epoch blight resulted in a COVID-19 Pandemic Paradox at the practice. Deleterious conditions from the pandemic produced unintended positive consequences relative to change, culture, and business interruption avoidance.

The Team

The team consisted of the following: the Regional Director of Health Informatics; the practice physician-champion; the practice Clinical Operations Managers; and the practice Chief Strategy Officer. Stakeholder physicians added iterative feedback and process refinement.

The Evaluation Case

Evaluation cases, as Harvard Business Publishing describe, illustrate a business success or failure, and result in lessons learned from an analysis of the underlying reasons for the success or failure (Austin & Kelly, 2012). This evaluation case reports reasons for the business success of the original PI charge, MCC implementation. Unforeseen benefits and shared lessons learned from this analysis evolved as the foundation for the practice story of unintended positive consequences and radical change.

The Execution

An AAR provided a tool for the practice to analyze challenges and identify other improvement opportunities that emerged from MCC implementation. In addition to establishing a deep understanding of reasons for outcomes, the AAR process offered the team a blueprint to capitalize on the lessons learned from past successes and failures with the ultimate purpose of improving future performance (Salem-Schatz et al., 2010). Probative AAR questions guided the following:

What did you expect would happen?

Practice leadership intentionally chose the MCC PI initiative to expand further application of the existing practice management (PM) system and bridge full conversion from manual to electronic scheduling, coding, and billing documentation. Leaders expected MCC to further automate and streamline billing/coding for hospital rounding; and improve the post-hospitalization scheduling capture rate for potential follow-up patient referrals to the practice.

What unexpected results occurred?

The AAR revealed that DMAIC (Define, Measure, Analyze, Improve, and Control), a tool used in Lean Six Sigma (LSS) methodology had unknowingly guided the PI assessment. Vijaya-Sunder (2016) described LSS as the composite of “Lean” and “Six Sigma,” through the amalgamation of these two philosophies as well as the human and process aspects of quality management. DMAIC, illustrated in Figure 1, subsequently framed the MCC incremental PM change process that evolved.

Figure 1
DMAIC Descriptions for MCC

Define: *Define the Problem*
Practice leadership identified the need to change from a manual to an electronic health record charting process. The need for the process to interface with a new physician practice management (PM) hospital-rounding billing system drove the technology shift.
Measure: *Quantify the Problem*
Metrics included financial improvement in captured charges/collections and accurate/timely data to schedule patients for follow up.
Analyze: *Identify the Cause of the Problem*
The measured results from three-months of data were compared between the baseline and new data obtained from the PM system.
Improve: *Implement and Verify the Solution*
The taskforce identified and adopted the improvement strategies framed by the software.
Control: *Maintain the Solution*
The taskforce monitored the *Improved Process*, assessed through iterative review, and refined for further standardization for compliance with established standards.
(goleansixsigma, n.d.).

How did you assess the issue, and what occurred?

The team detailed the *Original Process* using a freeware Business Process Model and Notation flowchart application, Bizagi (Bizagi Modeler, 2020). MCC incorporated iterative refinements during process initiation. The authors adopted the DMAIC model to frame a case roadmap, amplify report findings, and guide the continued analysis that uncovered unintended positive consequences influenced by the effects of COVID-19. Three months after execution, the authors finalized and documented the *Improved Process* using Bizagi. The AAR confirmed that the successful conversion to MCC achieved the qualitative and quantitative intended results, based on pre-established expectations. Retrospective analysis determined that the incremental MCC changes created the cultural readiness for the practice's radical organizational transformation and viability. A redirected case research question, "Does intentional process improvement mitigate against healthcare operations interruption?" evolved from AAR findings.

What went well and why?

By comparison to charge and patient capture records prior to PI implementation, MCC resulted in a 10 percent improvement in charges and collections; and concomitant 10 percent capture improvement for new referrals. *Improved Process* results from billing and patient capture documentation contributed to a return on investment (ROI) approximating $75,100. This ROI realization included a synthesis of the additional revenue generated, and expense efficiencies achieved from the elimination of wasted steps. Practice leadership appointed a physician-champion as a liaison between the physicians and staff to lead process refinement coordination and help navigate a unity of direction. Formalizing the physician-champion role improved a previous unsuccessful MCC activation attempt several years earlier that likely, in part, failed from this lack of designated leadership. An intentional effort to modify the patient-encounter documentation process for physician-initiated coding and accurate completion of billing information contributed to positive results. In addition to a favorable ROI from MCC activation, the AAR identified value in the development of a cultural predisposition for the practice to embrace future process change.

Awareness of LSS as a PI tool from the quiver of multiple available methodologies was another benefit that contributed to the efficacy of this effort. Figure 1 describes the DMAIC tool. Each dimension of the tool applies process details for the practice MCC study.

What hurdles did you identify, and how could improvement occur?

Acceptance of the need for change and overcoming project skepticism was an initial cultural hurdle. As noted above, efforts to adopt MCC several years earlier had failed but the team improved the process this time by adding the practice physician-champion role. Correcting the lack of a written MCC standard work process (SWP) and physician process standardization could improve physician and support staff efficiency by eliminating process steps and rework. If the team champion had written and communicated upfront the *Improved Process* expectations relative to the *Original Process* expectations, physician frustration could have reduced. Clarity and additional transparency, with more detailed MCC implementation training, might have improved the process rollout.

The Process Flow and Metrics

Figure 2 illustrates the *Original Process* flowchart. Figure 3 reflects revisions for the *Improved Process* that reduced process steps by 50 percent.

Figure 2
Original Process

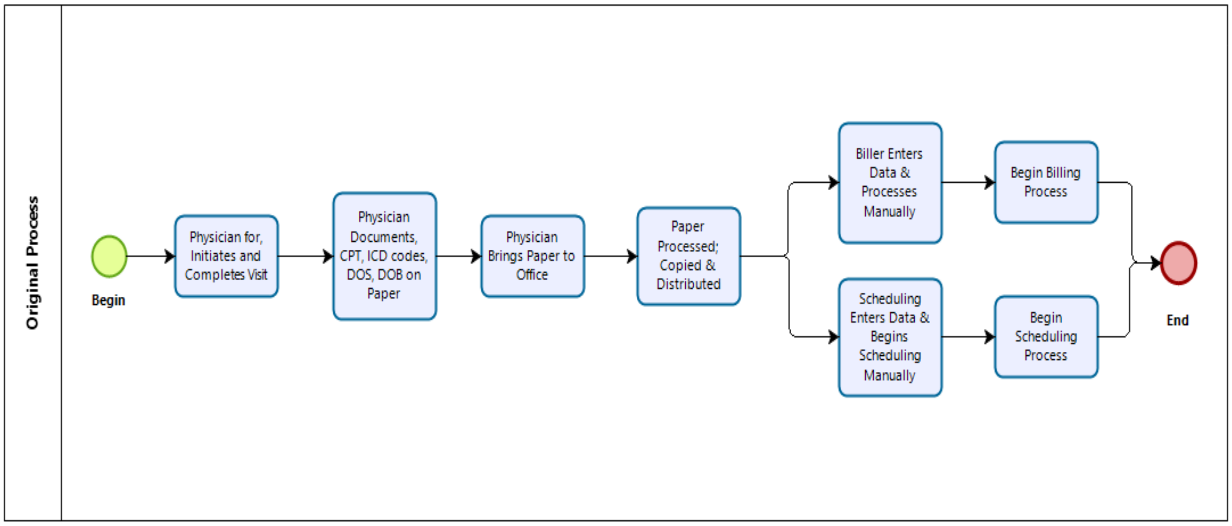
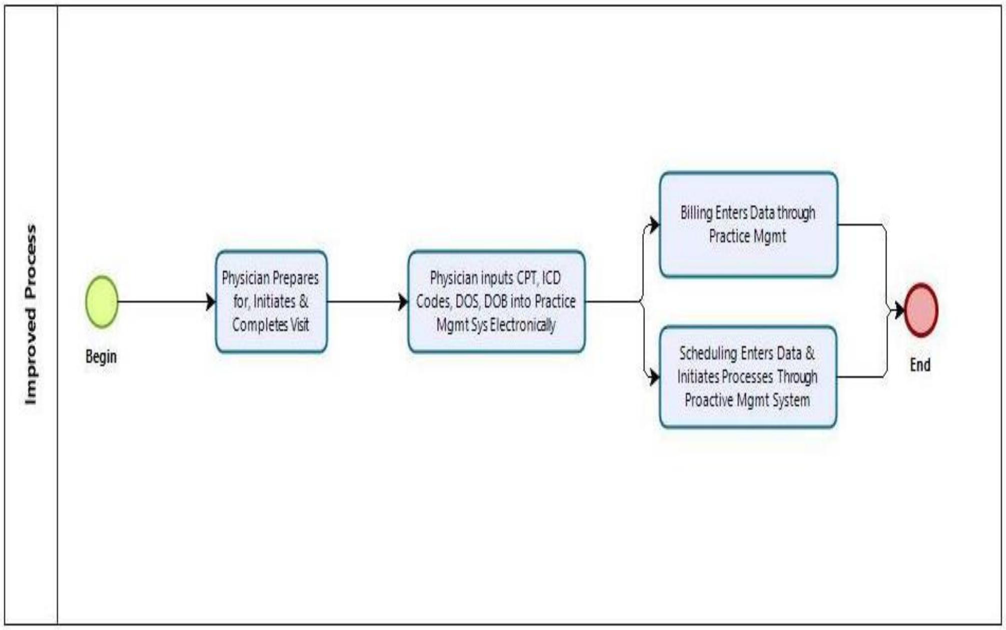


Figure 3
Improved Process



Lessons Learned

Unintended Positive Consequence

Shortly after ramping up MCC, the practice swiftly implemented virtual healthcare technology (i.e., telehealth and video-audio phone visits) by necessity, in response to the landscape created by COVID-19. The authors deemed the successful pivot to virtual healthcare delivery activation as an unintended positive consequence from this original MCC PI case that included the following selected reasons:

- MCC adoption helped avoid business interruption by eliminating the face-to-face encounters required under the *Original Process* manual billing/scheduling information exchange.
- MCC activation cultivated a new culture and readiness for the practice to "pivot" and embrace virtual healthcare as an essential technology tool.

Change the Process, Change the Culture, Change the Outcome

With the MCC completion and cultural readiness established through the PI process, the practice experienced a common organizational pattern of achieving disruptive innovation through the implementation of a new technology for the organization (Obeidat et al., 2020). Mandal (2017) links the benefits of an appropriate organizational culture of change with the development of dynamic capabilities and an organization that is open to learning and improving. This cultural openness is vital to help ensure uninterrupted services to patients. The value of gaining knowledge from disruptions and considering strategies borrowed from contingency planning and disaster readiness, according to Mandal (2017); it also can help build risk-mitigation strategies.

The outcomes from using MCC cultivated both the practice's openness to learning and an awareness of improvement that helped establish the favorable cultural conditions for virtual healthcare implementation. Committing the *Original Process* and the *Improved Process* to writing helped refine and highlight the benefits from the successful change effort. Use of LSS for structured analysis assisted the team with an examination of the process variables and spotlighted culture as a vital change element.

Where and How to Start

Organizations should consider the following when launching structured PI initiatives:

- Acquaint stakeholders with PI benefits for alignment with the organization's mission, culture, and financial sustainability.
- Consult organizations that use PI to determine suitability among available PI methodology options (e.g., LSS, Scrum, or Agile) and solicit example experiences.
- Adopt a PI methodology best suited to the organization's culture and industry.
- Select PI projects that can be controlled for change or have the potential to optimize ROI.
- Commit processes for improvement to writing. Peter Drucker popularized the saying "What gets measured gets managed" inferring the benefits of written targets that encourage process refinements for eliminating waste and improving organizational ROI (Prusak, 2010).

Looking to the Future

This case generated multiple opportunities deemed worthy for further study. Selected recommendations to incubate potential future innovations include the following:

Monitor Systems, Engage Key Stakeholders, and Evaluate Vulnerability

Proactive process improvement, unknowingly, provided the conditions that allowed the practice to pivot and avert crippling business interruption. Jones and others (2011) identified benefits for organizations that continuously monitor systems and processes, address issues as soon as possible, and engage key stakeholders in multidisciplinary brainstorming and structured follow-up. The unintended positive consequence of MCC on business interruption avoidance, relative to COVID-19, also catalyzed the thought that leadership should consider where and how other vulnerable system failure modes in the practice's processes might exist and assess for additional risk mitigation opportunities.

Systematically Consider Risk Issues during Technology Conversions

A potential caution identified during research on health technology implementation was the unintended consequence of "e-iatrogenesis." E-iatrogenesis is inadvertent patient harm caused, at least in part, by the application of health information technology (Weiner et al., 2007). An example may include the unintended failure to elicit an equal amount of comprehensive patient health breadth when converting or transitioning systems (e.g., from manual to electronic processes). This lack of amplified information may fail to provide adequate context for a patient's condition and affect treatment decision-making that might result from the well-intended effort to become more efficient.

Discussion and Conclusion

The AAR and broadened inquiry catalyzed convincing support for the research question generated, "Does intentional process improvement mitigate against healthcare operations interruption?" The practice executed MCC at the direction of corporate leadership shortly before COVID-19 ignited a survival instinct that catalyzed the pivot to virtual healthcare and organizational transformation. The experiences at the practice resembled an assertion by Ayra (2010) that organizational transformation is not likely to occur unless survival is in question.

The incremental change of MCC implemented prior to COVID-19 and evolutionary transition to virtual healthcare for organizational viability unleashed a confidence for the practice to embrace the culture change that also ameliorated business interruption. Ultimately, use of PI for change was the offensive dynamic that leaders used to improve strategically the outcome. This paved the way for the practice to further its innovation tactics; and increased the likelihood for the culture of a better tomorrow.

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Discussion Questions

1. An operational pivot was easier to accept when organization survival was at stake during the COVID-19 pandemic. The authors reported that the initial change attempt, which did not have a project champion, failed. Why is a project champion or change agent pivotal to achieving successful change; and how did organizations respond to the pandemic with other steps to remain viable?

2. The use of DMAIC (Define, Measure, Analyze, Improve, Control) unknowingly framed the practice's process improvement (PI) assessment for change, which can strategically impact operational outcomes peculiar to each organization. Why is it important to choose and align process improvement methodologies based on their best fit with organizational culture and the organization's industry? Additionally, what continuous improvement tools and techniques can be helpful when working within a cultural framework?

3. Opportunities for process improvement in organizations often focus on eliminating wasted process steps and optimizing return- on- investment (ROI). How can one use an After-Action Review (AAR) to identify opportunities and improve projects you work on in your discipline?

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College is for *Becoming*: Finding Your Raison D'être

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Abstract

First year college students are under an enormous amount of pressure: They are in a hurry to find a major, decide on a career, and do so while being fiscally responsible – avoiding the college debt pit that shapes 44.7 million people in the United States. This palpable anxiety makes it lucrative for first year students to seek out majors that promise high paying jobs upon graduation. Deciding on a major, with limited exposure to other fields of study, has consequences. In the United States, 23% of full-time employees report feeling burned out in their jobs – regardless of how well paid they are. In this article, I argue that it is through discovery that we find what we are good at, what interests us, and what empowers us to try just that much harder. Rather than finding a major that will lead to a well-paying career alone, the goal of the first year of college is to explore and find a major that is emancipatory and revealing, and that supports one's life.

Keywords

academic major, career exploration, career planning, internships, raison d'être, service learning, study abroad, volunteer work

Introduction

> If I didn't define myself for myself, I would be crunched into other people's fantasies for me and eaten alive.
>
> – Audre Lorde

What is it that I want from life? This is a large question – one that requires a great deal of thought and soul searching. But this work needs to be done, preferably before you spend too much time in a major or academic program. With 44.7 million Americans owing a total of $1.6 trillion in student loan debt (Freidman, 2020), first year college students are under an enormous amount of pressure. They are in a hurry to find a major, decide on a career, and do so while being fiscally responsible – avoiding the college debt pit, which, for 2019 graduates, was an average $30,062 per student (Kerr, 2020).

While it is understandable to seek stability – to have a plan – it is unsustainable and not sensible to follow two different and diverting paths. That is, if you want to be an artist, but study to be an investment banker, what sense does that make? Often, folks who engage in this type of splitting find spend their life negotiating time and energy in ways that are not always productive and can, at worst, be self-sabotaging. It is, therefore, healthful to search out ways in which one's career can fund one's life – as opposed to living just to work.

Just as important as investigating what you want from life, it is also important for you to consider *what you value.* This is not an abstract inquiry with fanciful answers, nor are the answers concrete – they will change as you learn and grow. But identifying these parts of your identity (what you want and what you value) will be most beneficial as you consider what career paths you are well suited for. Thinking through your wants and values informs your decision process and better prepares you to make empowering choices throughout your life course. You are not just picking a major, you are taking your first steps into a career. It is exciting. It can be fun. But it is certainly not a step to take without serious considerations.

Questions to ask Yourself

So, get honest and get specific. What do you want and what are you willing to do to get it? Here are some examples of questions to ask yourself:

Do You want to have Children?

According to a United States Department of Agriculture (USDA) study, it costs $233,610 to raise a child (Lino, 2020). This amount varies based on one's location (urban or rural, for example) and does not include the cost of college. If you or your partner are not able to conceive, will your career enable you to fund in vitro fertilization (each attempt to become pregnant costs at least $20,000) or take time off without significant penalties (Uffalussy, 2014)? Adoption is an option too. On average, according to recent figures for adoption agencies, the domestic process will cost hopeful parents at least $70,000 (American Adoptions, 2022).

Outside of these immediate questions, readers should consider how becoming a parent may shape their careers. While some positions have family leave and helpful programs, not all careers, or positions, or both have family-friendly policies.

Last, can you afford to raise a child, or children, alone? In every society, women (especially those raising children alone) are disproportionately poor. Sociologists call this phenomenon the feminization of poverty (Christensen, 2019). These social facts warrant serious consideration: How will children fit (or not fit) into your life?

Are You OK with Moving for Your Career?

In a 2017 study by the Pew Research Foundation (Pew Research Center, 2018), the majority of those surveyed, 69%, said that family gives their life meaning. The next source of meaning came from one's career, with 34% of respondents identifying with this choice. With this data in mind, it is fair to ask if you are willing to move away from your family of origin or family of choice? And if so, serious thought needs to go into how you will create an alternative support system. At some point or another, everyone will need help or a person to talk to. How will you find your people?

If you are willing to move, it is important to identify whether there are any places you want to be more than others. Are there places you absolutely do not want to live? Are the places you want to live affordable? Answering these questions in earnest may require you to travel – for you to explore firsthand. If travel is not an option, you should consult travel guides and online resources, so you can understand the culture of a location and its history.[1] Additionally, it makes sense to become familiar with cost-of-living guides.[2] How will your location shape the maintenance of your family? For example, what are the schools like (for kids) and education costs? Who will take care of elderly family members? If it is you, will you be able to have a lifestyle that makes this work less stressful?

Certainly, there are other questions to consider. These questions may be unique and esoteric, depending on your personality and values. Regardless of whether others agree with you or not, take as much of your preferences into consideration as possible. Academic advisors and career counselors may be helpful resources as you process these questions. College campuses often have career centers, or counselors, or both who can provide you with information of different professions. In addition to information, these networks may have access to volunteer or internship opportunities in the career you are considering. It is an excellent use of your time to shadow a professional or volunteer at the job site. This will provide you with a first-hand education into how working professionals negotiate the wants and values you have recently identified. This early information gathering will assist you greatly as you consider career options. In fact, it is helpful knowledge to have as you begin the college application process. For example, some may identify strong family ties or spiritual networks as core to their identities. This may mean that they pick a college with a major that is near your hometown, or places where you can practice your faith, or both.

Though many first-year students enter college with excitement, these feelings of curiosity can easily turn to anxiety when considering what major they want to commit to. Even for those who enter university programs as declared majors, experience within the major can change one's mind – leaving them feeling a bit lost as to what they might do next. This palpable anxiety makes it lucrative for first year students to seek out majors that promise high paying jobs upon graduation. Students listen to a variety of sources – from their family and friends to media outlets and governmental agencies such as the Bureau of Labor Statistics. But deciding on a major, with limited exposure to other fields of study, has consequences. In the United States, 23% of full-time employees report feeling burned out in their jobs – regardless of how well paid they are (Robinson, 2019; Wigert, 2020). Put a little differently, the promise of a high salary will only take a person so far. It is important to consider one's wants, values, and propensity for future growth and development.

In this article, I argue that it is through discovery that we find what we are good at, what interests us, and what empowers us to try just that much harder. Rather than finding a major that will lead to a well-paying career alone, the goal of the first year of college is to explore and find a major that is emancipatory, revealing, and supports one's life. I suggest that first year students engage in the following activities throughout their tenure in undergraduate institutions: volunteer, engage in service learning, study abroad, and find internship opportunities.

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[1] Fair or not, some locations are not diverse and not amenable to all lifestyles. It is important to consider whether the location is a sundown town or if the location has communities that have similar values to your own.

[2] Online resources, such as *Nerd Wallet* and *Smart Asset*, provide excellent cost of living calculators.

Engaging in these four activities will take time. This means that you may not be able to work as many hours or you may need to take four classes (instead of five). But the payoff is well worth these short-term sacrifices. One does not need to volunteer and have an internship at the same time. But, by engaging in these activities, throughout the course of one's time in school, you will develop networks, references, a professional demeanor, and an understanding of what fields or careers you find exciting. These resources are priceless. As the old saying goes, "It's not what you know, it's who you know." That is true here too: Doing the work and meeting helpful people, in combination with your degree, will help you find positions – especially in a competitive job market.

Volunteering

Very few people like to do unpaid labor, especially when they need actual money to afford things like food, books, and rent. Therefore, your volunteer activities should be for those causes or missions you feel strongly about. If you care about animals, volunteer at a pet shelter. You need not sacrifice multiple hours there per week. A few hours (under 10 per week) will do. But this work will allow you to build references (so you can get paid employment, when the time comes), socialize with others who share your values, and possibly learn from the shelter managers or veterinarians.

In this way, volunteer work offers several benefits that one cannot gain through college courses alone. These experiences may very well shape what you major in. Perhaps you realize that you have strong managerial skills due to your volunteer work or you realize that you want to run a business that caters to pet parents. Through the experience of volunteering, you expand what you know about yourself – your likes, your dislikes, and your potential. You then can use this information to discover a major and career path that is a good fit for you.

Service Learning

Like volunteering, service learning exposes you to possible careers, but it does so under the auspices of a for-credit college course. Some service-learning courses take place during the regular semester and others take place during school breaks (Spring Break, for example). In addition to building your portfolio of experiences and professional skills, service learning enables you to work closely with professors and community members – creating networks for additional opportunities, leadership skills, and professional references. The short nature of the work, a semester or a spring break, allows you to move on – either building on the experience in another capacity or changing direction altogether.

Study Abroad

Study abroad opportunities can have the potential to offer volunteer and service-learning opportunities. They certainly offer learners the experience of immersion into another culture. In doing so, you can see what occupations make sense in that place and consider if you can develop a skillset that will make you marketable internationally. Professors lead most study abroad opportunities; often, this enables you to meet professionals from the host country; is an excellent way to build global exposure, references, and networks; and prepares you to become a global citizen.

For many, study abroad opportunities appear costly – with financial limitations creating a barrier. I encourage you to investigate financial aid packages offered by the school, larger community, and other possible funding agencies (including the agency making the travel arrangements). Because travel strengthens our capacity to appreciate diversity, many universities have scholarships to encourage such endeavors. Start looking for them as soon as possible and talk with school officials, including writing and editing programs, so that you can develop compelling essays and application materials.

Internships

Scholarships and grants share similar characteristics to internships: all are competitive and will require you to produce polished and professional application materials. A good deal of the work needed to make your resume or curriculum vitae shine will have been done early on – through your volunteer, service learning, and study abroad activities. Bravo! When preparing to apply for internships, you can contact the networks you already have made – for advice, possible opportunities, and a good letter of reference. In addition to these individuals, you will want to work closely with your academic advisors and any type of career development program offered at your school. These people can help prepare you for potential interviews, coach you on how to dress, and may even be able to suggest places to apply.

Conclusion

Overall, college is for learning and growing into a professional who can support your life with a career you find rewarding. It may not be rewarding all the time, but overall, it will be a career you cannot imagine yourself without. To learn and grow, you must gain exposure to experiences that help to build you as a professional. These experiences will build your character, create concrete examples of your professionalism, and provide learning opportunities that you will bring back to the classroom and let shape your studies in important ways. Without this important strategy, it is easy to let others define what field of study you should pursue and limit your career options. Because you are the only one who has to live with yourself, day in and day out, take college as the opportunity that it is: to learn more about yourself and to make yourself proud.

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About the Author

Dr. Sandra E. Weissinger (sweissi@siue.edu) is a sociologist committed to calling out violent systems, institutions, and behaviors. Weissinger does this work well, engaging in scholar-activism in the United States and Mexico. In 2018, Weissinger won the highest accolade for teaching her university offers, the *Teaching Excellence Award*. She has authored and contributed to several academic works. Her most recent anthologies include *Violence Against Black Bodies: An Intersectional Analysis of How Black Lives Continue to Matter* and *Law Enforcement in the Age of Black Lives Matter: Policing Black and Brown Bodies.* Her work concerning students and academic institutions include contributions to *Beginning a Career in Academia: A Guide for Graduate Students of Color* and *Research Justice: Methodologies for Social Change.* As part of her commitment to scholar-activism, Weissinger regularly contributes as a public lecturer, invited speaker, and community collaborator - recently obtaining funding from the National Science Foundation and Innovations in Community-Based Crime Reduction (CBCR) Program to further equity-based initiatives. Dr. Weissinger is based in the Saint Louis metro area and is an associate professor of sociology and the Sociology Graduate Program Director at Southern Illinois University Edwardsville. ORCID 0000-0003-0098-4639.

Discussion Questions

1. What is it that the learner wants from life? Said differently, at the end of their life, what is the story they want to be able to tell?

2. What does the learner value? What makes life worth living?

3. What does the learner enjoy doing? What activities can they do for a prolonged period and still find enjoyment in them?

4. What is the learner willing to sacrifice to have a particular career?

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"Waves"
2013

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Email Matters

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Abstract

Composing emails to professors, administrators, teaching assistants, and others who are not family or friends is crucial to students' future success. Students send emails riddled with unedited errors. Sometimes they are abrupt, lacking greetings or crucial information. There is a formula for writing an email, but too many students do not apply it. This article guides students through how to write an email and why it matters socially and professionally.

Keywords

netiquette, student, email, professionalism, university

Introduction

> I know, you get in a hurry. You have other things on your mind. And you live in a culture in which manners are no longer stressed. But believe me: It is better that you learn this lesson from me than from a future employer who might not fire you for your lackadaisical manner of addressing him or her but might think twice about elevating you to a position in the company that requires decorum.
>
> – Professor Angela Jackson-Brown
> Assistant Professor of English, Ball State University

Your email messages matter. Your first email interaction with your professor acts as an introduction to you and your work. Writing errors in the hiring process usually lead to rejecting the candidate, so use this opportunity to start being careful about how you write. Professors get many strange emails from students, so a little effort goes a long way to getting the help you need and want. Sometimes student emails are riddled with errors that make it difficult to understand their message. Sometimes they are abrupt, lacking greetings and signatures that make it unclear if the message is intended for the recipient. Sometimes students write tirades, rather than requesting support or guidance. Such messages appear disrespectful.

Student bias is sadly present, and students need address it, just as professors must judge their students independently.

When students perceive themselves as customers in a consumer model of education, they are more likely to behave in racist and sexist ways (Cottom, 2013). Assorted studies, reports, meta-analyses, and anecdotal evidence show that professors' gender and race identities influence students' behaviors and expectations (Savonick & Davidson, 2016). That translates into attitudes communicated in emails.

Showing respect does not indicate submissive behavior. Recognizing the effort and stature in someone's position suggests you understand the context in which they have succeeded. In that sense, you are participants of a shared community. They may have greater knowledge than you have and deserve respect for that, but their standing should not be understood as demeaning you. Likewise, showing respect to those who have not achieved your degree of knowledge represents a respect for their ongoing development and not a diminution of your achievement. A shared community, like a university, includes friends as well as people of varying abilities, talents, and interests. Though you may envy or dismiss their accomplishments now, learning to show respect to everyone will give you greater insight into their function within the community, besides establishing an ethic that is crucial to a liberal democracy.

Learning to recognize unconscious prejudices is awkward in the beginning. In writing, your word choice and punctuation express everything. Making changes to your style can feel "unnatural," but that will fade as you adapt to habits that are more formal. These biases are culturally instituted, and we all have an obligation to overcome them. That means you need to remain aware of your audience and adjust your tone accordingly. Adopting the standard formula establishes a neutral space from which to develop.

Email Formula

Recipient ("to")

In school, when you write your professors, you likely have no reason to include anyone else. When dealing with administrative issues at school, you might email multiple people, but make sure you understand why each person is on the list. You want to avoid mass emailing people unnecessarily. As with anything you write, you want to be aware of your audience and set the tone accordingly.

- Decide as well if you are going to "cc" people or if "bcc" is necessary. If you "cc" (copy) people on a message, then you are suggesting they need to know about this communication but are not expected to reply as it does not directly concern them.
- If you "bcc" (blind copy) someone, then you have copied that person on a message but no one else knows. This can become awkward if others discover you were hiding some people on the email. Avoid "bcc" unless you have a very good and clear reason for including that person without anyone else knowing about it.

Subject Line

Your subject line should tell your reader the topic you will present. Do not leave it blank. Overly general subjects like "test" or "registration" suggest you will be vague; "heeeeeeeelp" makes you sound whiny and incapable of making even basic effort to help yourself (by editing, for example). Just as you would with a title of an essay, you often need to go back and edit your subject after you have finished the email clarify the focus.

Salutation

Do not skip the greeting. It helps your readers know this email was meant for them. Traditionally, people wrote Dear –, when addressing someone by name, but Hi followed by the name seems to work now too. Use To whom it may concern: when you are writing someone whose name you cannot find online (always search first to make sure you cannot find it). Do not start an email with hiya, hey, yo, etc.

Introduction

Make sure your readers know who you are, how you have met, or how you know them. Do not make them discern this or research it. Do not assume they will remember you. Administrators work with hundreds, if not thousands of students every day, and some professors teach hundreds of students every semester. Asking readers to figure out who you are, puts your email at the bottom of their to-do pile.

Message

Explain your situation as succinctly as possible. In more complicated situations—such as replying to an email request for information or responding to a series of questions—then consider putting the information in a list, separating points in paragraphs, or somehow dividing each element from the rest.

Request

Make your question, request, or need absolutely clear. The person should know exactly what you want. Do not expect your reader to understand it unless you ask for it. If you need documentation of some kind, state the names of the documents you need. If you want to know the time for something, ask for it; do not write "I'd like to attend, but can't find the info," when you could write: "What time is the event?" Be direct but polite.

Signature

Always include Sincerely, Cordially, Best, Thank you, Looking forward to your reply, or some form of closing statement followed by a comma and your name on the next line. Avoid demands like, "Please respond immediately." Not everyone has access to their email throughout the day and some check their emails only during designated periods. In your signature, you can include your contact information: email address, phone, Skype or Google ID, any social media handles, titles or positions you might hold on campus, and/or physical address. Closings like "May the force be with you" or "Peace and light" may undermine the seriousness of your request.

Following these guidelines minimizes potential bias. Your clarity and respect makes it easier to respond with what you need.

At work, much communication occurs via email, so learning to write clearly is a professional tool. Any error in emails during the hiring process can disqualify you. Once hired, emails continue to represent you. They are not as casual as texts. Sometimes, however, in a back and forth exchange with someone, the rules relax. People become familiar. That does not mean that they are equally familiar in the next exchange. Knowing the etiquette surrounding emails will help you manage the tone variations you are likely to encounter. Being accustomed to the tone and style of emails, as well as reviewing your emails for clarity, will also help you avoid making the kind of errors that impact your professional success–like quick, rude, emotional emails. People remember those and it takes a lot of work to overcome those moments.

In your professional environment, you will face many styles of email communication. People have group emails, which have a different tone than emails to a supervisor, which have a different tone than emails to those in an administrative office, such as Human Resources, whom you may never meet. Navigating these variations becomes easier with comfort in basic email decorum. Your emails to professors, college administrators, advisors, coaches, and such are a part of this practice. It is one of the many advantages of college.

Since email is a place where we want speed, these attitudes slip out most easily there. Review your emails to ensure you did not slip into any language that was not appropriate to use with the professor or other university employee. Following a formula makes that easier.

Crisis Situations

In case of a family or medical emergency, make sure to write your academic advisor or dorm counselor first. Those are the figures at the school who will guide you through the appropriate academic and health support to ensure a smooth return. They can also contact your professors if you are in the hospital with limited access to email communication. Otherwise, send an email to your instructors and coaches, copying your academic advisor, so that they can plan any accommodations you will need when you return.

If you are not doing well in a class, schedule an appointment with the instructor. Do not try to address the situation via email. You need to explain why you have been struggling, what you can now do differently, and how you expect to maintain a better class standing, all of which is too complicated for an email exchange. Teachers will have questions or guidelines that necessitate a conversation. Also, in person conversation can help build rapport.

If you have missed a deadline for class work, you should also schedule an appointment to see what, if anything, you can do. That meeting will let the professor or administrator know you are taking seriously the missing deadlines. You can avoid some crises with time management. If you send your email at the last minute, before a test or deadline, it may be too late for the person to be able to help.

Some Things to Consider

Privacy

Imagine your email being shared with others. Is there anything you would change in what you wrote? Do it. At work, your emails belong to the company and can be reviewed at any time. Many companies have scanning software to check emails for inappropriate content, i.e. specific terms and phrases that the company deemed unacceptable. It is best to assume your email is public.

Specify your Request

Unless you are writing a congratulatory email, you are probably writing in order to gain information of some kind. Asking a question is best, since a question clearly requires a response. Writing that you need help with an assignment is not clear; asking for some kind of analytic tool that could help you interpret a reading or produce a written assignment ensures that your professor must reply with a means for doing the work. Writing an administrative office at your university saying you need help with registration is vague; instead, consider asking what steps you need to take in order to register for classes on your designated day.

Show What you Know

You can avoid useless responses like links to publicly available information on the college website or class learning site, by including those in your email.

Be Brief

People are busy. No one reads long emails carefully unless they are divided clearly with bullet points or other headers.

Tone and Style

Readers recognize if you are angry, frustrated, irritated, sycophantic, and so forth. No matter the situation, remain calm in your interaction. Learn to engage all faculty and administrators with respect, and you will avoid an awkward encounter later when your professional behavior influences your success.

- CAPS imply you are screaming and NO ONE WANTS TO BE YELLED AT. Using them regularly suggests you are emotionally volatile, and no office wants people who cannot control themselves. If you want to emphasize something you can use *asterisks* or italics, but do so minimally.
- Punctuation inserts meaning. Many question marks sound incredulous, which can be interpreted as rude, condescending, or dismissive; consider what it looks like when you write: "Why did you do that??????" Saying "Great news!" is more direct than the emphatic "Great news!!!!" Avoid too many ellipses...unless you really need them...and you probably do not.
- Emojis are always inappropriate when first getting to know anyone in a position of authority (professor, hiring personnel, boss, landlord, attorney, even your doctor). They can suggest you are immature in the way you express yourself, or an ease in the relationship that can be perceived as disrespectful.

Acronyms

Do not use text acronyms in emails until you have established a relationship with the recipient and you know that they will understand what you are saying, and appreciate it. LOL is rarely appropriate in official college communications, though FYI might be.

Urgency

I know someone who regularly writes IMPORTANT in her subject line, though it never has been. If something is truly urgent, pick up the phone and call. Then, follow up with an email. If it is not an emergency, you risk irritating the recipient.

Pause and Edit

Take a moment to review the email and confirm you have provided any information requested or made your own request explicit. You do not want to follow up with additional emails. With an important email, walk away to clear your head and then review it. Just as you should do with your essays and homework assignments, leave time to review what you have written before you send it out into the universe.

Conclusion

Practicing good communication habits in college makes them reflexes once you are in the workplace. You will be less likely to blast off an inappropriate email. You will have the patience to stop and take a breath before you reply to someone else's rudeness: "They started it" does not apply in the workplace. You will be able to present inquiries and needs with greater courteousness because you will have been practicing it. You will have an easier time getting positive results because you developed the right communication skills in college and know how to engage respectfully.

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About the Author

Charlotte Kent, Ph.D. (kentc@montclair.edu), is Assistant Professor of Visual Culture at Montclair State University. With a background in aesthetics and the history of ideas, as well as deconstruction and narrative theory, her scholarship analyzes the power structures surrounding the discourse of art. Her current research is on the absurd in contemporary art and speculative design, with an ongoing project about objects from the early 1970s as proto imaginaries of the digital age. She writes for both academic and general venues, to include *Word and Image, Journal of Visual Culture, Leonardo, Harvard Design Magazine, Chronicle of Higher Ed, Brooklyn Rail, CLOT Magazine,* among others, while contributing a monthly column on the Business of Art for *Artist's Magazine*. Based on her decade teaching in higher education institutions, she published *Writing for College and Beyond* (Peter Lang, 2019). She is a graduate of St. John's College, which partly explains her eclectic intellectual resources, and the CUNY Graduate Center. ORCID 0000-0002-1070-5472.

Discussion Questions

1. How does using a professor's first name, before being invited to do so, suggest disrespect?

2. How can you create rapport with instructors?

3. Why aren't emails always the best way to communicate?

4. How might you introduce a personal flair into an email formula but still remain within the boundaries of respect and professionalism?

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Employing Business Majors for Careers in Agriculture and Food

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Abstract

The growing world population, coupled with the disconnect from agriculture because of the decline in rural population, poses challenges for human resource recruiters hiring for the agriculture and food supply chain. Instead of looking only toward agriculture majors, recruiters should tap into the large number of business majors as agribusinesses require the same business principles and practices taught in business schools. The present article sheds light on the opportunities to engage urban and business students with the agriculture and food industries to address employment gaps. This article examines factors leading up to the current employment gap and the results of two assessments of business students on possible employment in the agriculture and food industries as well as in urban and rural locations. The results pointed to many similarities between students; however, urban students were less inclined to take a rural position. Higher pay was a strong incentive for both rural and urban students along with having similar views of the words agriculture and food.

Keywords

careers, employment, business, agriculture, agribusiness, food, undergraduate students

Introduction

The world population continues to grow, expecting to reach as many as 9.9 billion people by 2050, which is an increase of more than 25% from the current population (Population Reference Bureau, 2021). As a result, there also will be an increase in the demand for food. Advances in technology and science increased the production of available food; yet, several aspects within the farm-to-table supply chain continue to be an issue of concern. One aspect vital to the supply chain is the need for people to make it all happen. Thus, the ability to recruit and maintain a strong workforce in professional agriculture fields will be imperative (National Academies of Sciences, Engineering, and Medicine, 2021).

This article examines some factors leading up to the current employment gap and related agriculture education in addition to the impact of an agribusiness course on career choice and perceptions of undergraduate business students related to the agriculture and food industry. The goal of the article is to bring light to the opportunity to engage business students with the agriculture and food industries to address the employment gap.

Background

Agriculture and Food Workforce

In 2019, agriculture and food industries accounted for almost 11% of U.S. employment with 22.2 million full and part-time jobs. Of that number of jobs, only 2.6 million were directly on-farm positions representing only 1.3% of the U.S. population compared to when it was 70% of the workforce in 1840 (Lepley, 2019; USDA Economic Research Service [ERS], 2021). Similarly, a study by Virginia Tech and Tyson Foods found that agriculture and food impact more than 20% of the U.S. economy employing approximately 43.3 million laborers (Simpson, 2019). AgGrad.com published an e-book showing the vast diversity of positions as it lists more than 300 possible agriculture careers (Hammerich, 2019). Thus, the connotation of agriculture jobs being on the farm is far from reality as only a fraction of the many career opportunities in agriculture and food industries are actually on the farm. However, many jobs in the industry remain vacant due to applicant and talent shortages (Bowyer, 2021; Olson, 2021). The resulting employment gap is a concerning problem for the agriculture and food industries.

The declining rural population as well as several other competing factors (i.e., more attractive and lucrative career options) play into the shortage of employees in the industry. As more people move to urban settings there is less of a connection to agriculture. Thus, people have less of an affinity for careers within the industry. In the United States, approximately 82% of people live in an urban setting while about 56% in the world do (Population Reference Bureau, 2021). Back in 2000, 47% of people in the world lived in urban areas. The urbanization trend predicts that percentage to bypass 60% by 2030. Even though there is a movement toward greater urbanization, people still need food, fuel, fiber, and other aspects within the agriculture industry. In a typical household, people in the U.S. allocate about 13% of their household budget toward food, behind housing (38%) and transportation (17%; ERS, 2021). Furthermore, the USDA Economic Research Service notes that, in 2019, agriculture and food-related industries made up more than 5% of the U.S. GDP by creating more than $1.1 trillion in goods and services.

Because of this demand, it is essential to have an educated talent pool to fill the employment need. The next section briefly examines education in agriculture and business.

Undergraduate Education in Agriculture and Business

The past decade has seen an overall increase in undergraduate degrees. Business degrees continue to increase as do those related to agriculture and food (Irwin et al., 2021). The two are intertwined at many levels from finance to marketing to supply chain. Wallace (1988) stated people in the Land Grant system realized as early as the mid-1930s that agriculture education needed to broaden its input to include business. It was not until 1957 that Harvard recognized the importance of interconnectedness and coined the term “agribusiness” (Wallace, 1988). Agribusiness education has resided primarily in the agriculture domain at land grant institutions ever since, though it is becoming more common at other types of schools.

Purdue University and the USDA release an agriculture and employment opportunity report every five years since 1980 (Fernandez et al., 2020). The 2020-2025 report predicts an average of 59,400 open positions for graduating bachelor-degree students in food, agriculture, renewable natural resources, and the environment (FARNE) each year. However, the upcoming FANRE college graduates will occupy only 61% of the openings. The majority of the job openings in FANRE will be in business and management, representing 42% of all vacancies, followed by science and engineering at 31% (Fernandez et al., 2020). The report predicts the growth in vacancies to surpass that of the previous five years by 2.6%. FANRE recruiters should recognize the need for students with business education and tap into business majors outside of traditional agribusiness programs and schools of agriculture.

Looking towards business majors for agriculture careers is not a new concept, yet higher education has been slow to implement agriculture education in business schools. Nearly 30 years ago, Burckel and Watters (1992) encouraged business majors to consider a career in agribusiness management. Similar to today's society, shifts in the way farmers conduct business create a market for trained and experienced agribusiness managers. Therefore, colleges and universities must attract more and better students into the agribusiness field. In addition, business is one of the most diverse fields as it is the most common field of study within each ethnic group. Hinrichs (2015) also reported the overall talent pool of business majors is the largest in higher education. That population of students is also more diverse than agriculture-related majors which should make the field even more attractive to the agriculture and food industries as they need to diversify to align with the changing landscape. The pool of potential business graduates with a bachelor's degree is also growing. The National Center for Education Statistics reported that from 2009 to 2019 all bachelor's degrees increased by 22 percent to about 2 million and of that business degrees increased 9% to 390,600 (Irwin et al., 2021). Filling the positions requires more than just getting students to work, they also need to develop skills for the workplace to make them successful.

Skills Needed in the Agriculture and Food Industry

Change in the agricultural-related industries continues to impact undergraduate agricultural curricula as history shows the continual need for improvements. As a result, over the years several organizations and authors have recognized the need for a change in agriculture education to highlight and enhance the skills needed of students entering the workforce (Bampasidou et al., 2016; Boland & Akridge, 2006; Burckel & Watters, 1992; Litzenberg, & Schneider, 1987; National Academies of Sciences, Engineering, & Medicine, 2021; Noel & Qenani, 2013; Thomas et al., 2009).

The NRC (2009) called for a reform to agriculture education to increase transferrable skills (i.e., teamwork, communication, critical thinking, and problem-based learning) that business schools value. Gillespie and Bampasidou (2018) showed similar findings through a comparison of other research which ranked the skills of interpersonal communication, creativity, critical thinking, writing, computer, teamwork, quantitative analysis, and knowledge of general business management all before the first mention of an agriculture skill. To address this issue, research in skill development in agriculture has been pointing towards experiential education, applied activities, and internships to develop these skills (Akridge, 2016; Parr & Trexler, 2011; Swenson et al., 2018).

Urbanization and Agriculture Career Awareness

As mentioned earlier, urbanization is creating a disconnect in the understanding and appreciation of careers in agriculture, not to mention where food actually comes from. Furthermore, urbanization has created a smaller traditional agricultural student base to recruit from (Lee, 1994).

A report by the National Center for Education Statistics amplified this fact as it showed that less than a third of rural people 18-24 enroll in college while almost half of urban enroll (Schaidle, 2020). Thus, urbanization and fewer rural students attending higher education create fewer college students with agriculture knowledge and awareness.

The scarcity of agricultural knowledge and awareness highlights a need for a transformation in student training. Thor (1994) recognized this nearly three decades ago as he stated, "students do not want farm-level agricultural instruction, but would rather receive agribusiness training for careers in the international food business" (p. 1206). At the Creating the Future Workforce in Food, Agriculture, and Natural Resources Workshop, panelist Ann Bartuska noted one of the challenges for the agriculture workforce "is the changing the outdated image of agriculture as cornfields, blue jeans, and tractors to reflect the exciting, innovative nature of the modern agriculture industry, in which workers are engaged" (National Academies of Sciences, Engineering, & Medicine, 2021, p. 4). Similarly, the report *Transforming Agricultural Education for a Changing World* (NRC, 2009) suggests academic institutions take action to enhance students' agricultural literacy and interest by showing where food comes from and demonstrating that there is more to agriculture than farming.

As mentioned, business is a large major and continues to grow. Studies have shown one factor is that business is a "default" major – meaning students select a business major because they do not know what they want to do yet (Glenn, 2011; Scifres, 2021). Introducing agriculture and food careers to these "default" business majors will help make them aware of the opportunities and attract students into the industry. Baker et al. (2011) found students are initially unaware of agriculture careers and had a negative perception, but after an introduction to the careers in the field, they became more positive and noted the need for more marketing. Even in high school, when students were asked in a study about agriculture economics careers, less than 20% were able to identify a job other than farming (Espey & Boys, 2015). The lack of awareness and negative perceptions have not changed much in the past few decades as they were similar to the findings of the 2001 Kellogg Commission (NASULGC, 2001).

Research Questions

The surveys conducted in this research examined students' perceptions of career choices concerning agriculture and food as well as living in rural or urban areas. The following hypotheses guided the research questions:

- There is no difference between urban and rural students accepting a similar job that is an urban or a rural area.
- There is no difference between urban and rural students accepting a job in an urban or rural area that paid higher.
- There is no difference between urban and rural students accepting a job in agriculture.
- There is no difference between urban and rural students accepting a job in food.
- There is no difference between urban and rural students' views of the words 'agriculture' and 'food.'

To examine this topic further, the author used data from a pre- and post-survey from an introductory agribusiness course. After noticing some interesting trends, the author created a second survey to expand on the research. The following are the methods and results from the surveys.

Method

Procedures

Two different data sets collected by the author using Qualtrics online surveys provided the data this article used. Students in an elective course called Agribusiness in the Modern Economy within a college of business in the upper Midwest produced the first set of data. More than 90% of the students enrolled in the course and completed the survey were business majors while there was also a small percentage of other majors who participated in the course. Data collection span across three different semesters. The pre-assessment primarily assisted the professor in designing the course based on an understanding of student backgrounds. The short post-assessment looked at the impact of the course on students' perceptions of careers in agriculture and food. Students were primarily at the upper-class level with the majority being seniors.

The second data set was a survey designed by the author in which other business professors willingly posted for students in various required courses that all business majors had to complete. The students were encouraged but not required to complete the survey. The author selected the courses to include business majors in different disciplines and limit the duplication of students.

Analysis

Data analysis utilized descriptive statistics as well as a Pearson's bivariate correlation. The survey data of various business students were analyzed using independent samples of the Kruskal-Wallis Test, one-way ANOVA, Mann-Whitney U Test, and independent t-tests.

The USDA Economic Research Service statistical number of 50,000 people in a city informed the classification of the urban v. rural divide for the variables in the testing. Therefore, students who grew up on a farm or in communities with less than 50,000 people were 'rural,' while the others were 'urban.'

Results

AgriBusiness Course Survey

Descriptive Statistics

The combination of the three sections of the agribusiness course showed the students (n=93) were primarily from an urban area as only 39% responded they grew up in a rural community or on a farm. A discrepancy in the number of participants differentially skewed comparisons between the pre-and post-survey as 11 fewer students completed the post-assessment, 10 of whom were from rural communities. The following results were from the pre-assessment except for the last two questions.

When asked about what type of position they would like upon graduation, 27% said business owner or entrepreneur. Management positions (23%), sales (16%), and operations (10%) were the next highest desired positions. Also, 50% of all the students would prefer to work in a medium-size company, while 22% preferred a small company and 26% in a large.

Of the total 93 respondents, 69% said they would prefer to live in a rural community depending on the quality of the offered job(see Table 1). This is an increase in the number of possible employees willing to live in rural compared to the 39% of students who grew up in a rural setting who may have an affinity to such regions.

Table 1

After graduation, if offered a good job would you prefer to live in a rural community?

Response	Frequency	Percent
Definitely Not	5	5.4
Probably Not	24	25.8
Probably Yes	39	41.9
Definitely Yes	25	26.9

In the post-test, two questions central to this article asked students about the impact of the AgriBusiness in the Modern Economy course. The first question showed that 95% of the students became more aware of the different careers in the industry (Table 2). Then, most important to industry recruiters, the students reported 81% became more interested in taking a job in the agriculture or food industries, and only 7.4% were unlikely (Table 3).

Table 2

Summary of Student Awareness of Careers in the Agriculture and Food Industry

Response	Frequency	Percent
Strongly Disagree	1	1.2
Disagree	0	0
Neither agree or disagree	3	3.7
Agree	20	24.4
Strongly Agree	58	70.7

Table 3

As a result of the class, I am more interested in taking a job in the agriculture and food industry?

Response	Frequency	Percent
Extremely unlikely	3	3.7
Somewhat unlikely	3	3.7
Neither likely or unlikely	10	12.2
Somewhat likely	27	32.9
Extremely likely	39	47.6

Comparison Statistics

The overall descriptive statistics are positive for industry recruiters; yet, when broken down for comparison between students from urban and rural it still shows that the students have similar thoughts toward careers in the agriculture and food industry. However, the only significant difference is that the communities in which rural students consider to live is dependent on the quality of job offered after graduation (Table 4).

Table 4

Comparison of rural and urban students' living preferences

	N	Pearson Correlation	Sig. (2-tailed)
Grown up Rural v. Urban (0 and 1)	93	1	
If offered a good job, would you prefer to live in a rural community	93	.219*	.035

*p< .05 (2-tailed)

The bivariate correlation of Pearson's $r = .219$, $p<.05$ shows the correlation is significant, meaning those who answered they grew up in a rural community or on a farm were more likely than urban students to consider living in a rural community if offered a good job. Comparison statistics analyzed the significance between rural and urban students for the other questions. There were no other significant differences in the assessment.

Career Choice Survey

Descriptive Statistics

Students enrolled in in various courses of a college of business participated in the survey. Of the 270 student respondents, analyses only included the 252 responses that completed 85% or more of the survey. The following are some of the more pertinent demographics of the students.

Table 5

Sample Demographics Characteristics

Characteristics	*Frequency*	Percent
Major		
Management	87	35
Marketing	55	22
Accounting	35	14
Finance	23	9
Other	51	20
Year in School		
Freshman	24	10
Sophomore	54	21
Junior	78	31
Senior	94	37
Grad	2	1
Grew up in:		
Rural	157	62
Urban	95	38

Table 6 lists the results of the four questions examining students' preference for taking a job based on different variables.

Table 6
Questions on taking a job with different variables

Would you take a job in a rural community (outside of a metro), if the position was ***very similar*** *to a position in the metro area? (n=251)*

Response	Frequency	Percent
Definitely Yes	91	36.3
Probably Yes	107	42.6
Probably Not	42	16.7
Definitely Not	11	4.4

Would you take a job in a rural community (outside of a metro), if the position ***paid more*** *than a position in the metro area? (n=252)*

Response	Frequency	Percent
Definitely Yes	143	56.7
Probably Yes	92	36.5
Probably Not	13	5.2
Definitely Not	4	1.6

Would you take a good job at an ***agriculture company*** *in any size community if it is in your field? (n=250)*

Response	Frequency	Percent
Definitely Yes	65	26
Probably Yes	120	48
Probably Not	49	19.6
Definitely Not	16	6.4

Would you take a good job at a ***food company*** *in any size community if it is in your field? (n=249)*

Response	Frequency	Percent
Definitely Yes	68	27.3
Probably Yes	126	50.6
Probably Not	47	18.9
Definitely Not	8	3.2

Comparison Statistics

Table 7 shows the comparative analysis of the above four questions that examine the opinions on taking a job between of rural and urban students.

Table 7

Comparison of rural and urban students' employment choices

Variable: Grew up in rural or urban	Sig.	Decision
The distribution of *"Would you take a job in a rural community if the position was similar to a position in a metro area?"* is the same across categories of Dichotomous coding for *Grew up*.	.000*	Reject the Null hypothesis
The distribution of *"Would you take a job in a rural community if the position paid more than a similar position in a metro area?"* is the same across categories of Dichotomous coding for *Grew up*.	.001*	Reject the Null hypothesis
The distribution of *"Would you take a good job at an agricultural company in any community if it is in your field?"* is the same across categories of Dichotomous coding for *Grew up*.	.635	Retain the Null hypothesis
The distribution of *"Would you take a good job at a food company in any community if it is in your field?"* is the same across categories of Dichotomous coding for *Grew up*.	.319	Retain the Null hypothesis

Note. Test: Independent-Samples Mann-Whitney U. *p< 0.05

There were no significant differences between students who grew up in large, metro areas in comparison to those who grew up in small towns when analyzing questions comparing potential agriculture jobs or food jobs. However, statistically significant differences were seen between the two groups when comparing job location and salary. Further analysis is below in Table 8 for the two significant findings using Mann-Whitney independent sample t-tests to compare the means for large, metro communities and small town.

Table 8

Growing up compared to the willingness to take a job in a rural community

Grown up	Frequency	Mean
Large City-Metro	95	2.20
Small Town-Farm	156	1.71

Note. The result of this test is *p = .083 which shows it is not significant when compared to the Mann-Whitney test showing significant differences, most likely based on the sample sizes not being the same between groups. Note for the t-tests that 1 equals "Definitely Yes" and 4 is "Definitely Not."

Growing up location compared to taking a job in a rural community if paid more

Grow up	Frequency	Percent
Large City-Metro	95	1.74
Small Town-Farm	157	1.38

Taking a job in a rural area if it paid more resulted in *p < .001, indicating a significant difference between groups (rural v. urban students). An interpretation is that even though there is a significant difference between rural and urban students, there is an extremely high likelihood of rural students taking a job if it paid more while there is a fairly high number of urban students as well.

Students views of the words Agriculture and Food

To examine how students viewed the difference between agriculture and food, respondents recorded words or concepts that come to mind when they hear the word ‘agriculture.’ The second question listed in Table 10 just inserted *food*, instead of *agriculture*. Also, in Table 10, the words are group into the top three categories of similar words.

Table 9

Students’ top 10 responses to thinking of words related to agriculture and food

Words related to Agriculture		Words related to Food	
Urban students	Rural students	Urban students	Rural students
1. Farm-Farmer	1. Farm-Farmer	1. Restaurant	1. Restaurant
2. Food	2. Crops	2. Fast-food	2. Eat
3. Crops	3. Food	3. Grocery Store	3. Grocery Store
4. Animals	4. Animals	4. Hungry	4. Vegetables
5. Plants	5. Livestock	5. Burgers	5. Fast-food
6. Growing	6. Rural	6. Eat	6. Hungry
7. Business	7. Corn	7. Fuel	7. Meat
8. Corn	8. Growing	8. Necessity	8. Cooking
9. Country	9. Raising	9. Nutrition	9. Energy
10. Cultivating	10. Hard work	10. Edible	10. Farmers

Table 10

Top three categories of the words related to agriculture or food in order of highest count

Word categories of Agriculture of both urban and rural students	**Word categories of Food** of both urban and rural students
1. Words containing “farm”	1. Where food comes from other than farm (grocery, fast-food, etc.)
2. Crops-Plants (and types of such as corn, wheat, etc.)	2. Nutrition-Necessity-Fuel
3. Animals	3. What to do with it (eat, cook, etc.)

Discussion

Each of the two surveys provided insight into potentially increasing the talent pool for agriculture and food careers. Yet, research must further examine undergraduate business students to better understand their career motivation choices. It is worthy to note the two surveys had opposite percentages of rural and urban students. Interestingly, more urban students were in the agribusiness course than rural. The motivation for taking or not taking the agribusiness course could be a future study. A topic could examine if urban students are more interested in learning about agribusiness because rural students already about it.

Agribusiness Course

The pre- and post-assessment of three sections of the introductory agribusiness course designed for business majors provided insight into the students' opinions and the benefits of offering the course. Contrary to popular belief, a high number of all students (69%) indicated they would stay in a rural community depending on the quality of the job offered. However, there was still a significant difference between rural and urban students as a greater percentage of rural students would take the position in a rural community.

The impact of offering an agriculture course to business students is also telling. Only one student in the course (n=93), indicated they did not become more aware of careers in the agriculture and food industry, and that student already had an agriculture background. More importantly, the results also showed only 7.4% (n=6) of the students were not more interested in taking a job in the agriculture and food industry. Professionals in the industry should take note and promote teaching ag-related courses in business programs to help make the industry more attractive and boost the potential talent pool.

Career Choice Survey

The results of an analysis of the agribusiness course designed the career choice survey. Students of various business majors not enrolled in the agribusiness courses participated in the career choice survey resulting in a much larger sample size (n=252). The results indicated a high percentage of students willing to take a job in a rural community, including the urban students. The percentages were fairly high for both, but it did prove to be statistically significant between rural and urban students – meaning rural students were more likely to take a rural position than urban students. The indication of rural students taking a rural job more than an urban student is not surprising as Estes et al. (2016) also found the same significant results. Conversely, the percentage of urban students considering a rural job after graduation was much higher than many people might think.

Adding in the variable of higher pay to the position also made it significant. The result was an extremely high percentage of rural students (98%) as well as urban students (85%) who would take a higher paying rural position. In alignment with research on the extrinsic motivation of business students (Scifres et al., 2021), rural ag-related companies need to pay higher wages to attract both rural and urban students if they want to be competitive in recruiting.

Examinations explored the difference of perceptions between agriculture and food to see if the wording would change the desire to take a job in that field. Percentage-wise there was very little difference in taking a position – 74% yes for ag jobs and 78% for food jobs. Ironically, further analysis revealed the percentages between urban and rural students were the same in each question.

Finally, two open-ended questions examined students' thoughts on the words agriculture and food to see if there was a difference between the rural and urban students, as well as the two words themselves. Once again, there was very little difference in the way rural and urban students view agriculture and food, especially in the highest occurring words. However, the results revealed slight differences in wording as rural students associated 'hard work' with agriculture, while no urban students mentioned it. Also, rural students referred more to "growing," and especially "raising," indicating a personal connection to agriculture. When asked about the words and concepts related to food, the two groups again were very similar. The popular responses for both groups addressed where the food came from (i.e., restaurants, grocery stores, fast food). "Farm" was referenced in both groups but not as often. It is also fascinating to note the urban students referenced more concepts around nutrition, fuel, and necessity. Interestingly, both urban and rural college students thought of being hungry when thinking of food, and the urban students listed burgers while rural listed meat and vegetables.

Limitations

This study is only a fraction of students within one college of business at a Midwestern, public university; thus, not generalizable to a larger population. However, it does offer a snapshot for further in-depth study. The survey gathered information on a select few variables shaping student preferences on where they might work or live after graduation. Further research is necessary to examine other factors influencing student perceptions of careers in agribusiness. The class survey was designed for the demographics of the students to provide information for the professor in course design. Additional questions may delve more into the opinions and perceptions of the students concerning agriculture and food.

Conclusion

The employment gap in the agriculture and food industries looks like it will continue as the need to feed a growing world population increases. This, coupled with the decline in rural population and a disconnect from agriculture, poses challenges for recruiters hiring employees for the agriculture and food industries. Instead of looking only at students with agriculture degrees, recruiters should tap into undergraduate business students. Agribusinesses require many of the same management and business principles and practices as other industries that recruit from business schools.

This study indicates potential in recruiting urban business graduates for agriculture and food careers; thus, recruiters should not dismiss this potential market of talent. Furthermore, business students possess many of the skills needed by agriculture and food companies. In fact, the food, agriculture, and natural resource industries are in the greatest need of workers to fill management and business positions (Fernandez, 2020). The overall talent pool of business majors is the largest in higher education and more diverse than agriculture-related majors (Hinrichs, 2015), making business majors attractive to the agriculture and food industries.

Conner et al. (2014) suggested introducing more business content in agricultural education. Maybe the opposite would work, too – more agriculture content in business education to address the need for employees in the agriculture and food industries.

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Discussion Questions

1. How can agriculture and food industry professionals engage and encourage business schools to offer ag-related courses or content?

2. Will the trend to offer employees the ability to work remotely increase urban students' desire to take an agriculture-related job? Explain.

3. What words positively resonate with college students to explore careers in the agriculture and food industries?

4. Will technology advances decrease the need for agriculture and food industries employees? Explain.

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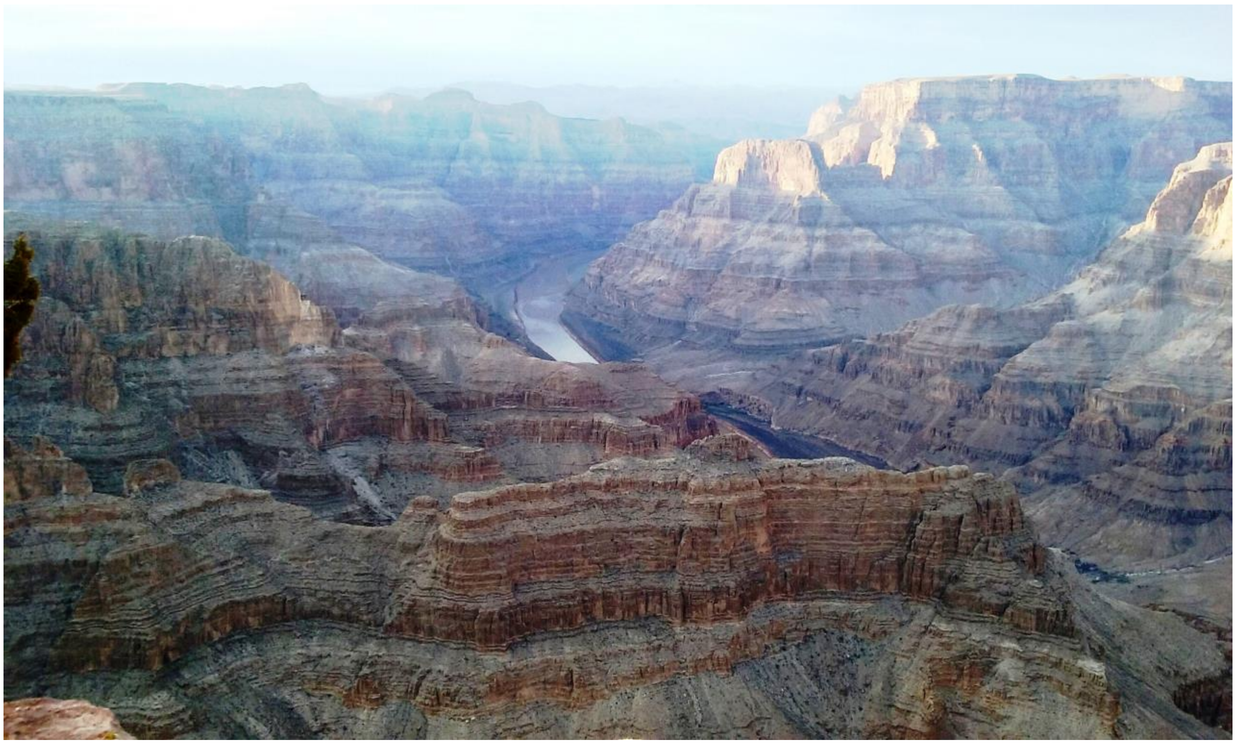

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Creating a Competitive Advantage for a Successful Career Trajectory

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Abstract

A competitive advantage is the ability to stay ahead of one's present or potential competition. This article will examine how first-year college students can create their own competitive advantage by preparing themselves not only academically but also professionally to position themselves for a successful career trajectory. The article will cover crafting professional job search documents, such as a résumé and a cover letter; the art of interviewing via various mediums (phone, live video, recorded video, in person, panel); and creating a professional brand through LinkedIn.

Keywords

career, success, career readiness, branding, internships

Introduction

The college years are a critical time for students to prepare themselves for their future careers. We live in a competitive world, and first-year college students should take advantage of the resources that are available to them at their colleges and universities. Career Centers offer important student success services to students at all levels. This article will delve into how first-year college students can create a competitive advantage to be successful in their careers. We will start by discussing what a first-year timeline for first-year students should look like. Next, we will talk about professional preparation. Topics reviewed under professional preparation will include crafting professional job search documents such as a résumé and a cover letter, the art of interviewing on different platforms, creating a professional brand on LinkedIn, and gaining experience while being in school.

First-Year Timeline

Many students do not think of career planning as something important until they are in their senior year in college. Nonetheless, students who start planning their career early in their college years will be better prepared as they start applying to jobs and embark in the interview process (The University of Minnesota, 2021). Students during their first year in college should think of exploring. For those who are undecided about their major, visiting their college's career center to begin learning about their skills, values, and interests will be important (The University of Minnesota, 2021).

What are the typical recommendations for first-year college students? First, they should complete a self-assessment of their personality, interests, skills, and values to learn about what major would be a good fit for them, reconfirm their selection or open new avenues that students had not considered (University of Minnesota, 2021; FAU Career Center, 2020). Second, first-year college students could meet with faculty and ask about the career paths of former students, coupled with other career options. Additionally, students could explore their academic strengths and interests by taking introductory courses, join student clubs and organizations, volunteer, or engage in internships (University of Minnesota, 2021). Something else first-year college students could do is conduct an informational interview with a professional mentor; that way, they will learn valuable information about the professional mentor's career (FAU Career Center, 2020). Finally, it would be a recommendation for first-year college students to meet with a career counselor to get their professional résumé ready, conduct a practice interview, and learn about Career Fairs and Career Expos that the institution coordinates. First-year college students will start having a competitive advantage over other students by engaging with employers early in their college journey. They can start networking with employers, learning about internships, part-time and full-time positions as early as their first year (FAU Career Center, 2020).

Professional Preparation

This section will review creating professional job search documents, specifically focusing on the two most important documents which are résumés and cover letters. In addition, we will discuss interviewing techniques, and the power of having a LinkedIn profile.

Professional Job Search Documents

It is important for first-year college students to start working on their professional job search documents. We will share tips and tricks for students to develop résumés and cover letters that will look professional to potential employers.

Résumés. A résumé is a must-have document in the job search process. First-year college students often ask what they should include on their résumés, especially if they have no work experience. First-year students in college are in the process of acquiring skills and experiences that will help them make the jump to the workplace. A professional résumé will give students the tool to apply to opportunities such as internships, on-campus jobs, part-time jobs, work-study opportunities, scholarships, and student organizations. First-year college students can include information from their high school years; however, moving into their second year in college, they should omit high school experiences (Career Guide, 2021).

A college first-year student’s résumé should include the following information:

- Contact information: Name, full address or simply the city and State, cell phone number, and an email address that looks professional.
- Skills: Skills should include technical skills as well as soft skills, those that relate to personality characteristics and traits (team player, critical thinking skills, communication skills, leadership abilities, etc.).
- Extracurricular activities: College first-year students are bound to have gained experience and valuable skills from extracurricular activities. As such, they could include teams and organizations that they belonged to, as well as any achievements that students were able to accomplish during their first year.
- Education: The education section should be placed on top of the résumé as students will be currently enrolled in school. Students should include the name of the institution, the expected graduation date, the degree and major or minor. Moreover, students should include their GPA if it is over 3.20 to denote academic achievement. Any scholarships that the student has should be in this section as well.
- Work experience: First-year college students may lack work experience. However, they can compensate that lack of experience with other opportunities where they can learn career readiness skills. Such additional experiences are exchange programs, volunteer work, part-time jobs, seasonal positions, leadership roles, exchange programs or study abroad, and seasonal positions or internships (Career Guide, 2021).

Some tips and tricks for a college first-year student to keep in mind when working on a résumé are including bullet points. Bullet points present the information in a more concise way making it easier for the reader to follow. Students should avoid using first person language (“I utilized…”). Additionally, students should use an active voice and present diverse descriptions, even though the experiences may be similar. By using action verbs, they will use language that attracts, excites, and gets the attention of the reader. Descriptions can follow this formula: Action verb + details + impact, purpose, or result (Career Guide, 2021).

Formatting the document is important as students only have one impression to make a good first impression, and this applies to job search documents as well. First-year college student résumés should be one page in length. Formatting needs to be consistent. The use of bold, italics, and underlining should be careful to give the résumé an uncluttered look. Margins will be 0.5’’ at a minimum. Times New Roman or Arial are commonly accepted font styles in résumés between ten and twelve points. Résumés will be sent in PDF format (Career Guide, 2021).

Cover Letters. A cover letter should be one page long, with three paragraphs. Cover letters are students’ opportunity to answer the question as to why the employer should hire them. Why are students a good fit for the position? It is important that students read the position description carefully so they can address the needs of the role (Arizona Student Engagement & Career Development, 2021).

Targeting the cover letter to the position that students are applying to is a time-consuming exercise, but one that is likely to impress the employer. Students should demonstrate their enthusiasm and interest in the opportunity. Read the job description carefully, so their cover letter really speaks to the requested qualifications. A few recommendations related to the cover letter are the following:

- The contact information should go at the top, the same way as it goes on the résumé.
- Students should write Dear Hiring Manager, Dear Hiring Committee, or Dear Human Resources Director if they do not have a contact to whom to address the letter.
- The first paragraph introduces the student and their interest in the position. Students may want to include how they found out about the opportunity.
- The second paragraph will talk about what students have to offer to the employer in question at an individual level, highlighting their skills and qualifications.
- The third paragraph will focus on what added value they will be bringing to the organization.
- The last paragraph provides closure. Here, first-year college students can reiterate their interest in the organization and thank the employer for their consideration (Arizona Student Engagement & Career Development, 2021).

The Art of Interviewing

First-year college students can have a competitive edge by preparing for all kinds of interviews and be aware of new techniques that are permeating industry. Traditional interviews, those where employers ask candidates about their skills and experience to gauge for fit, have been the norm for decades. Traditional interviews come in all shapes and forms! They can be in-person, phone, one-on-one, panel interviews, live video interviews, asynchronous video interviews, structured, and those with unstructured questions. No matter the interview type, first-year college students should be prepared for them all (Lewis, 2018). Moreover, one of the most important ingredients to a successful interview is enthusiasm and having the right attitude. In H. Anthony Medley's book Sweaty Palms, the Neglected Art of Being Interviewed, the author states: "Because you radiate what you feel, your state of mind will be directly related to the success or failure of your interview" (Medley, 2005, p. 111).

According to the Global Talent Trends 2020 report (Lobosco, 2020) that surveyed more than 9,000 recruiters and hiring managers, traditional interviewing is not good at assessing candidates' soft skills (63%) and weaknesses (57%). Furthermore, traditional interviews are time consuming, and rely on asking the right interview questions to get a clear picture of a candidate (Lobosco, 2020). Fortunately, more innovative interviewing tools have emerged. According to the Global Talent Trends 2020 report (Lobosco, 2020), the five most useful interviewing techniques are the following:

- Soft skills assessments (59%): Soft skills assessments provide an objective view of candidates' personal traits. Examples of high-tech tools are Koru and Pymetrics. These tools use neuroscience to assess candidates' soft skills such as flexibility and teamwork, which predict job performance (Lewis, 2018).
- Job auditions (54%): Job auditions consist of bringing in talent to the organization and let them see what work would be like. In return, employers will get a clear picture of the candidates' skills. Companies will ask candidates to do job auditions in the shape of hackathons, bringing them in for a full day of work, or even hiring candidates for a trial period spanning several weeks (Lewis, 2018).
- Casual setting meetings (53%) lets employers see a more authentic side of candidates in a low-pressure environment. While these used to be outliers, today more than half of

all recruiters and hiring managers see the usefulness of less formal interviews. It puts everyone at ease, allows candidates to show more of their personality, and gives a great impression of the employer's work culture.

- Virtual reality assessments (28%): Employers increasingly use virtual reality assessments as a recruiting tool to measure candidates' skills, show the organization's culture, and attract younger talent (Lewis, 2018).
- Video interviews (18%) allow employers to consider more remote candidates efficiently. The way in which video interviews work is by having candidates record themselves answering basic questions for approximately 15 minutes. The benefits of video interviews are that busy candidates can record themselves as time permits, whereas nervous candidates can feel more relaxed. On the recruiter end, they can efficiently review a high number of candidates in a short span of time (Lewis, 2018).

Once first-year college students are familiar with the five most useful interviewing techniques, they need to prepare for their interview. The purpose of the first interview should not be to get the job, but rather to get to the second interview (Martinez, 2010). Students should thoroughly prepare for the interview and follow up with the recruiter. Some highlights from Harvard Business Review's strategies of effective interviewing (Trull, 1964) include the following:

- Preparedness: The number one mistake that candidates tend to fall into is the lack of planning and preparation for an interview. Candidates should anticipate questions they may be asked and prepare themselves accordingly.
- Rapport building: The interviewer should attempt to make the interviewee feel comfortable, especially in the job application process, promotion, or in other similar situations. The interviewer can take some notes to remember what happened and refer to their notes to continue building rapport with the candidate (Trull, 1964).
- Managing the conversation: The interviewee is sensitive to all reactions by the interviewer. Being aware of this, the interviewer may easily navigate the conversation in the most productive way. Phrasing a question by rewording it into a rhetorical one gives the interviewee a period to think through a definite response. Nodding is the most effective way to support a candidate. Other nonverbal cues are similarly meaningful (Trull, 1964).
- Developing information: Successful interviewers use broad, broad questions. Frequent questions allow candidates to answer with information they may feel important, and they can expand into other areas that candidates deem important. Once candidates respond with information, the interviewer can follow-up with specific questions that will look for short answers (Trull, 1964).
- Silence: Nowadays, silence seems to be always avoided. It is for this reason that inexperienced interviewers will not take silence in an interview well and may go on to the next question while the interviewee is taking the time to really think about the response (Trull, 1964).
- Active listening: Often, people fall into hearing what they want to hear, as opposed to what has truly been said. To clearly hear what is said during an interview, interviewers need to be aware of their own filters that may block clear and accurate reception of information (Trull, 1964).

- Data analysis: Once the interview is conducted, the interviewer should analyze the data. First, the interviewer will be reviewing the content of the interview to analyze what was being said and whether or not it was reliable. Then, the interviewer will investigate the verbal – what was heard – and nonverbal – what was observed – content. Interviewers additionally will subjectively evaluate candidates' feelings and attitudes (Trull, 1964).
- Ending the meeting: The last 10% of the interview is crucial. There typically will be a plan of action, something that either or both parties will need to achieve (Trull, 1964).
- Follow-up: Interviewers tend to fail at documenting conversations that occur during an interview. By jotting down impressions, key events, and mutually agreed information, the interviewer will be able to reconstruct the interview at a future date, which will provide a framework for planning follow-up sessions (Trull, 1964).

Creating a Professional Brand

The best way to create a professional brand is by opening a LinkedIn profile. LinkedIn is a professional brand that will give first-year college students access to the global job market. LinkedIn has more than 600 million users across 200 countries (Garriott, 2015; Ngo, 2020). LinkedIn is the place to find and be found. College students can use LinkedIn to set a professional online presence, which is important for securing career, internship, and volunteer opportunities while still in school (Ngo, 2020). By doing so, they will have access to over 1.5 million student jobs and internships. Further, more than nine in ten companies use LinkedIn to recruit new hires (Garriott, 2015).

First-year college students can work with a career counselor on their LinkedIn profile. To have a complete profile and start applying to opportunities, they should review and act upon the following points (Garriott, 2015; Ngo, 2020).

(1) Upload a professional photo. Profiles with photos get fourteen times more views than those without a photo (Garriott, 2015). Some career centers offer professional headshot services. First-year college students should inquire and take advantage of that service.
(2) Write a memorable profile headline. The headline is a short slogan that will cover the one thing students want a recruiter, hiring manager, or future colleague to know about them. For example: "Honors student seeking summer research internship."
(3) Spend some time on the Summary statement. The summary statement tells one's story. This is the section where students can bring to life their experience and aspirations (Garriott, 2015).
(4) Detail your experience. Students can include more or less detail on their experience than what they include on their résumé. Students should include a brief description of what they were responsible for and what they were able to accomplish.
(5) Additional profile sections. For students who are starting their careers, they can substitute lack of experience with additional profile sections such as volunteer experience, part-time or unpaid work, contract work, internships, and organizations.
(6) Develop a robust network. 80% of job openings are never advertised (Garriott, 2015). It is not who students know, but who students know knows. That is why starting to focus on building a strong network is so important.

(7) Be unique and have your unique LinkedIn URL. LinkedIn users can edit their LinkedIn URL to make it look more professional and achieve search engine optimization to make it easier for employers to find them.
(8) Show your work. Students can include actual examples of their work. They can upload documents or link to media, presentations, and documents.
(9) Use relevant keywords and ask for recommendations. Browse job listings that students are interested in to find keywords that they can include in their LinkedIn profile. Students should evaluate their résumé for soft skills, and include soft skills along with hard, measurable skills. Students can add them to the "Skills & Endorsements" section of their profile (Garriott, 2015; Ngo, 2020).
(10) Review the content on LinkedIn. Students can explore and follow companies, talk to recruiters, and follow influencers who provide advice for success (Garriott, 2015; Ngo, 2020). According to research from the Society for Human Resource Management (2013), approximately 90% of recruiters extensively use LinkedIn. Students can spark interest from these professionals by keeping their profile up-to-date and having an active online presence (Ngo, 2020).
(11) Apply for jobs. LinkedIn has more than 20 million job listings, including student jobs and internships. Once candidates find positions that interest them, they can simply use LinkedIn's Easy Apply feature, which allows candidates to include additional materials to a stored résumé and hit send (Ngo, 2020).

Summary

First-year college students need to prepare themselves in a way that will differentiate them from their classmates. Gaining a competitive advantage truly is at their fingertips, and their college career center office team can help them get prepared. This article reviewed how first-year college students can gain that competitive advantage by learning what to do in college to be successful and preparing themselves for the professional world. As part of the professional preparation, first-year college students can focus on crafting a résumé and cover letter, practicing for several types of interviews, and working on their brand by creating a LinkedIn profile.

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Discussion Questions

(1) How can first-year college students develop a competitive advantage to be career-ready?

(2) What must students do during their first year in college to be successful?

(3) What should a first-year college student professional résumé, cover letter, and LinkedIn profile include?

(4) What are some tips and tricks for first-year college students to maneuver through the distinct types of interviews?

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Reflection

A Simple Introduction to Partial Differential Equations

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Abstract

Faculty members often are pressed for time when teaching introductory level courses to mathematics majors and, frequently, must omit interesting topics due to time constraints. This article presents a novel way of introducing undergraduate mathematics students to partial differential equations (PDEs) as part of a differential equations (DE) course that requires minimal in-class time. The differential equations course under discussion is the first differential equations course math majors take at our university. Unlike some differential equations courses, this course is available for only three credits (as opposed to four); therefore, time is of the essence when planning the course and covering material in class. The method we use modifies the method of basic indefinite integration used to solve the ordinary differential equation (DE) $y' = f(x)$ in a way that works well for similarly simple PDEs. This method provides students (and time-crunched faculty members) with the ability to cover partial differential equations in setting where they, otherwise, might not be able to do so.

Keywords

partial differential equations, undergraduate mathematics majors, indefinite integration, time-efficient instruction

Introduction

Our university offers a three-credit differential equations (DE) course as part of our math major. The course is a stand-alone course and does not lead up to a more advanced DE course. At the end of the semester, it was the instructor's desire to provide a brief, simple lesson as an introduction to partial differential equations (PDEs). An informal investigation of what other colleges and universities did, found that most first semester DEs courses either (1) did not cover PDEs at all or (2) used the time-intensive method of separation of variables. Not finding much in the literature that presented a quick way of briefly introducing PDEs, the instructor took the method of basic indefinite integration used to solve the ordinary DE $y' = f(x)$ and modified it for similarly simple PDEs. While this method might have limited applications, it addressed the relevant pedagogical needs quite well. The two relevant goals are, specifically: (1) to provide students with a brief introduction to an interesting topic; and (2) to provide students with a minimal background in PDEs, in case they were to encounter it in the future. Our approach to teaching simple PDEs allows the instructor to introduce the topic in a minimal amount of time while serving valuable pedagogical goals.

Instructional Methodology

We now discuss the specific way that we go about presenting PDEs in class. Prior to going over examples of what we do, we must first make a few comments about indefinite multiple integrals. Whereas the usual indefinite single integral yields arbitrary constants of integration, an indefinite multiple integral will yield arbitrary functions. It is this characteristic that limits how useful indefinite multiple integrals would be to applications, as the integral itself gives no clue what form this arbitrary function could possibly be. But, pedagogically, this is not a problem.

We teach this material at the end of the course, as is usual with PDEs in a DE course. Specifically, we cover this topic after infinite series solutions of DEs. We start the lesson with a review of taking partial derivatives (students will be familiar with this material from earlier in the course) and a review of definite multiple integrals. We introduce the indefinite multiple integrals as a new topic, and the use them to solve simple PDEs such as the examples below. Do note, though, that the students should be familiar with multiple integrals from prior calculus courses.

Here are a few examples.

Example 1. To solve $u_{xx} = xy$, we would do the indefinite double integral $u = \iint xy\,dx\,dx$. The first integral yields $x^2y/2 + f(y)$ where $f(y)$ represents any arbitrary function of y. Integrating again yields the general solution $x^3y/6 + xf(y) + g(y)$ where $g(y)$ is another arbitrary function of y. Any specific functions substituted for $f(y)$ and $g(y)$ would give us a particular solution.

Example 2. We now try solving a PDE where the PDE is mixed. To solve $u_{xy} = xy$, we use $u = \iint xy\,dx\,dy = \int x^2y/2 + f(y)\,dy = x^2y^2/4 + \int f(y)\,dy + g(x)$ where $f(y)$ is any arbitrary function of y and $g(x)$ is any arbitrary function of x to get our general solution.

It is possible to get more specific solutions under certain mathematical criteria (Peters, 2020), but this is not necessary for our pedagogical purposes here. Although this can certainly be added by professors who want to spend a little more time on the topic.

Pedagogical Benefits

The primary reason for this lesson is to expose students to PDEs without using an abundance of class time, but it benefits the teaching and learning process in other ways as well. As to the primary reason, this lesson offers the instructor a way to expose their students to PDEs in a one-hour lesson, which is useful for those instructors who do not have more time to spend after spending a semester teaching ordinary DEs. We believe that, although the lesson is brief, it gives the students good exposure to a new topic, especially when one looks at the presentation on an information per unit time basis. We discussed the achievement of the primary goal in the preceding section. We now discuss the additional pedagogical benefits.

First, this material also serves as a review of partial derivatives and multiple integrals. Since we discuss this PDE at the end of the semester, it serves as an excellent cumulative review of material we cover earlier in the semester, as well material in prior math courses. In particular, it provides students with an opportunity to reinforce materials they learned previously by seeing examples of such materials in a new setting and then solving problems on their own. The literature shows this method of learning by doing examples is quite effective (Zhu & Simon, 1987). This cumulative review is especially timely, since we normally teach this material shortly before the final exam.

Second, our approach not only reviews old material but also allows students to synthesize new, challenging concepts, with older, previously acquired mathematical skills. Greenes (1996) stresses the importance of this type of integrated approach to learning mathematics, as opposed to simply presented topics as a series of discrete, unrelated items. Additionally, this lesson also introduces students to the little discussed topic of indefinite multiple integrals and the related arbitrary functions. This topic gives students a deeper understanding, and a new perspective on, multiple integrals, as well as enabling the brief introduction of PDEs discussed in this article. Furthermore, presenting multiple integrals in this new light allows students who may have originally struggled with this topic to envision it from another angle, thus providing them with another opportunity to master the topic. As Graves and others (2009) note, different students learn in different manners, and this additional presentation of a challenging topic gives students a chance to look at this topic in a different way.

Finally, we note that we have taught this lesson since pivoting to online instruction due to COVID-19. The method we use to present the topic seemed to lend itself to online instruction, and we encountered no problems.

Conclusion

In this article, we present a way of introducing simple PDEs, in a first undergraduate DEs course, in a way that takes minimal time. The benefit to cost ratio of using this method is quite high, as the lesson takes only an hour. This technique would be of particular utility to math instructors who have limited time to cover the topic. The benefits are threefold. First, it provides undergraduate students with a background to elementary PDEs that they might not ordinarily receive. Second, it provides an opportunity to review previously taught material at an opportune time (the end of the semester). Finally, the introduction of this topic gives students time to synthesize multiple abstract topics. This type of practice helps develop the "mathematical maturity" of our students, as a key component of mathematical maturity is the ability to abstract the underlying nature from a challenging situation (Steen, 1983). This way of teaching PDEs is also easily transferable to an online environment, and the individual instructors can easily tailor the specific amount of time they spend on this lesson to their class' needs. In summary, this method of introducing PDEs is easy to implement, requires little time, and provides several pedagogical benefits.

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Discussion Questions

1. What other possibilities might exist to easily introduce PDEs to an ordinary DE class in a short period of time?

2. Does introducing PDEs necessitate multivariable calculus as a prerequisite for the course, or is a brief introduction of partial derivatives within the course sufficient?

3. To what extent does the introduction of arbitrary functions within this lesson increase student understanding of the concept of multiple integrals?

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Student Corner

A Comparison between the Ways Different New Yorkers Practiced Recreation and Leisure during New York Pause

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Abstract

During the COVID-19 pandemic in 2020, many New Yorkers quarantined in the state of "New York Pause." In this period, many had increased time for leisure. This study looked at New Yorkers from three neighboring counties and compared how people of different genders and ages (split into four groups) picked up new hobbies and furthered upon their old ones. The survey asked participants both if they picked up or expanded upon a prior hobby, and if so, to identify the hobby. Males and females showed no difference in how they picked up or continued hobbies during New York Pause, but younger participants both picked up and furthered hobbies more often than older participants. Along with that, the study categorized the hobbies picked up or furthered by type (Physical, Creative, Non-Physical Recreation, and Academic), and creative or creation-based hobbies saw the most participation, especially with people learning instruments, drawing, or cooking. All these results suggest that during their free time, most New Yorkers preferred to participate in hobbies under the creative or creation hobby umbrella.

Keywords

leisure, hobby, COVID-19, quarantine, New York, pandemic

Introduction

When the COVID-19 pandemic hit the United States in 2020, it impacted New York state residents physically, mentally, and socially, forcing them indoors and isolating them from normalcy and the world they once knew. At this time, many residents experienced an increase in the time they had free for leisure, leading to a boost in potential for leisure activity. Individuals spent this time in a myriad of ways, some picking up new hobbies, some furthering existing hobbies. This study questioned and compared males to females and people of different age groups (13-17, 18-29, 30-49, and 50+), asking them about the hobbies they started during this period and the hobbies they furthered upon. Using this data, the researchers found the groups that gained the most leisure benefits from hobbies during New York Pause (NYP), and thus had the greatest chance at coping with this stressful period.

New York Pause, COVID-19, and the Dangers of Quarantine

COVID-19 began spreading throughout the world in December of 2019, reaching more than 353,000 cases by March 23rd of the following year (Carbonell-Baeza et al., 2020). The World Health Organization officially categorized the disease as a global pandemic on March 12th, 2020, forcing most of the world to enter a state of quarantine and restricting human interaction (Andrews et al., 2020). New York's quarantine process, known as New York Pause formally began Sunday, March 22nd, 2020. This period had a major impact on the citizen's mental, physical, and social health (Xin et al., 2020).

The isolation and restrictions of human contact beyond those you lived with created higher levels of anxiety and stress, especially in young children and adolescents, to the point of 'threatening life itself,' along with strained relationships overall (Buzzi et al., 2020). On top of that, Chen et al. (2020) found these stress and anxiety levels to be much higher than "Non-Quarantine Times." Besides anxiety, quarantine can cause acute stress disorder, exhaustion, anger, irritability, insomnia, concentration difficulties, and trouble working, along with detachment, isolation, frustration, and distance from others (Bai et al., 2004; Jeong et al., 2016; Rubin & Wessely, 2020). Even money becomes a stress, as during quarantine it is more difficult to buy necessities (Fegert et al., 2020). These emotions derive from a lack of interactions since people are quarantining in their homes, it gets more difficult to find unique activities in which to participate, and these troubles only get worse as time in quarantine increases (Jiménez-Pavón et al., 2020).

Hobbies and Recreational Activities

A quarantine period comes with many issues. But these problems do not come without methods to avoid the negative effects of quarantine, these being differing hobbies, which some have found to have benefits that counter the harms of quarantine and increase overall life satisfaction (Cha, 2018). Further, the amount of recreation impacts the ability of one to cope during a period of quarantine, as Rodas et al. (2021) elucidated. The group found that levels of stress, anxiety, depression, and self-blame decreased as the level of leisure and hobbies increased. A study evaluating the resilience of psychiatric patients over the COVID-19 lockdown (Verolini et al., 2021) found that hobbies led to an increased mental resilience and fortitude. In addition, while exercising strengthens the body, it also strengthens the mind, and improves self-image and overall confidence. As such, physical activity acted as a possible means to combat the mental and physical stress of lockdowns (Jiménez-Pavón et al., 2020). Exercise saw a massive increase in popularity during lockdowns. Hobbies are incredibly beneficial toward mental health as well, with the potential to diminish the harms of quarantine. Creative or creation-based hobbies are a major help for older people's mental health, and these benefits helped self-worth, relaxation, escapism, and a sense of group, with the potential to help brain functioning (Adams-Price et al., 2017; Noice et al., 2004). Along with that, creative or creation-based hobbies that involve the arts boost confidence, self-understanding, and self-esteem, and women participated in them more (Davies et al., 2015). This is a common trend in any hobby in which people participated during the lockdowns, as in a study looking at 77 student pharmacists from the University of Kentucky (Johnson et al., 2021), which determined that hobbies and leisure significantly reduces rates of sadness.

This is not all hypothetical – if one looks back at 2020 COVID worldwide lockdowns, one can see how creative leisure acted as a force for improving one's mental health. Mansourian (2021a) examined user-generated content of knitting on YouTube as well as the comments of the videos, and he identified main themes and patterns. The examination determined that most viewers used knitting as an opportunity to passionately express themselves and relax themselves from lockdown stress, while getting a rewarding sense of accomplishment from a challenging hobby. On top of that, due to it being in a community, knitting also allowed this group of people to stay connected over this period. Another example of how hobbies impacted individuals is another study of YouTube videos from groups of people who grew bonsai trees as a serious, committed hobby, which determined that the activity acted as an opportunity to manage stress (Mansourian, 2021b).

Moving away from creative and creation-based hobbies, participation in video games has a similar positive response in young adults and teenagers, as creative hobbies do in adults, giving participants a sense of purpose, community, accomplishment, and healthy escapism (Beranuy et al., 2012). Those who are 10-to-19-year-olds and male participate in these hobbies the most, and as they are home in quarantine, this number likely would increase (Cummings et al., 2007). A final hobby type is academic, like learning a language, which shown to improve cognitive skills, especially in adolescents (Stewart, 2005).

This study sought to find out how males and females and people of different ages picked up and continued hobbies during NYP, which covers the gaps of hobbies during a quarantine period, along with it being specifically in New York. It compared both men and women, and in a separate comparison four different age groups. This study hypothesized that the male groups would participate in new and furthered hobbies more, along with the younger groups doing the same, compared to the older groups.

Method

Participants

This study surveyed participants of all ages above and including 13, split into 4 different groups: 13-17, 18-29, 30-49, and 50 and above. This survey considered sex or gender assigned at birth (GAAB), rather than gender alone, as it would have eliminated a situation in which there would be more than two groups to work with. Along with that, people who participated in this survey had to be current residents of three neighboring New York counties in the suburbs, with distribution to all willing participants through Google Forms. The US Census Bureau (2019) found that in two out of the three counties that this survey reached had a significant White ethnic majority of more than 70%, leading to race not being a factor in this study. The researchers did not take any information from any participants who participated, besides GAAB and age, being fully de-identified and anonymous.

Research Design

Development of this survey began in early 2020, during the very start of NYP. This study defined hobby as, “an activity participated in for a period of time, with the primary goal of enjoyment or furthering oneself,” which opened a wider group of activities to be under this umbrella. This study categorized hobbies into five types: physical recreation, creative hobbies, social and nonphysical recreation, academic, and a balanced combination of two or more categories. The school-based IRB, comprised of a school psychologist, administrator, and teacher reviewed and approved this study, allowing the surveying process to commence.

After the creation of a beta survey with all the questions for the survey, a trial process ran with 12 participants of varying ages. This trial process concluded in July of 2020, and a second trial process occurred for the second run of the survey in October of 2020. The feedback from the first trial included removing a question that asked if NYP continued past the period of the survey’s disruption, would the participant want to pick up a new hobby, and if so, what would it be; the question did not appear on the second version of the survey due to its open-ended nature.

Data Collection

Data collection encompassed results two different runs of the survey, the first being from August 1st to August 7th, 2020, and the second trial having run from November 1st to November 7th, 2020. This study used a digital survey on Google Forms due to quarantine still occurring at the time of this survey. All participants had to fill out an informed consent, their GAAB, and their age. Participants had to answer two different sections, both with the same questions but involving either a new hobby picked up over NYP or a hobby furthered during NYP. The survey asked participants if they picked up a new hobby and if they furthered a prior hobby during NYP, and if so what (in an open-ended question). Participants in this study also answered multiple-choice questions, asking for information about their experience with their new or furthered hobby.

Results and Discussion

A total of 254 participants received the survey, distributed digitally over Google Forms, with two participants visibly rejecting the informed consent, leading to a 99.21% usable response rate. A total of 102 of the participants responded during Trial 1 and 152 during Trial 2. Along with that, four surveys had to be deleted for issues in the response data, leaving the study with a total of 248 responses, or about 97.6% of the asked participants completed the survey.

In total, females made up 48.178% of the responses, while males made up 51.822%. Those 13-17 made up 37.652% of the total results, those 18-29 made up 20.648%, those 30-49 made up 22.267%, those 50+ made up 19.433%.

Chi-squared tests analyzed male and female participants' responses to different questions. The first series involved new hobbies picked up during NYP, and the second series involved hobbies that the participant continued over NYP. In both tests, GAAB did not act as a statistically significant factor. This data signifies that both males and females experiencing the period of NYP had no significant difference in the hobbies they picked up, nor in the hobbies they continued. This possibly means that the specific factors of NYP created an environment in which traditional outside factors are no longer having as major an effect on the hobbies participated in by both men and women. Now, while this may not mean that NYP had different effects on males and females, it does show that, in the realm of hobbies, NYP leveled the playing field with no specific effects on males or females.

Chi-squared tests analyzed four different age groups: 13-17 (Group 1), 18-29 (Group 2). 30-49 (Group 3), and 50+ (Group 4) as factors for learning or developing new hobbies, and for continuing prior hobbies. A significant relationship existed between age groups and whether individuals learned or developed new hobbies during NYP, X^2 (3, N=248) = 10.76, p = 0.018. Those individuals in the youngest two groups (13-17 & 18-29) had a higher chance than older individuals to learn or develop new hobbies (Figure 1). A significant relationship between age groups and whether individuals furthered a prior hobby during NY Pause also is evident, X^2 (3, N=248) = 10.777, p = 0.013. Those individuals in the youngest two groups (13-17 and 18-29) had a higher chance than older individuals to learn or develop new hobbies (Figure 2).

Figure 1

Contingency Table and X^2, "During NY Pause, have you found yourself learning or developing a new hobby or extracurricular activity that you hadn't participated in before?"

What is your age?		No	Yes	Total
13-17	Count	43.000	51.000	94.000
	% in row	45.745 %	54.255 %	100.000 %
18-29	Count	22.000	29.000	51.000
	% in row	43.137 %	56.863 %	100.000 %
30-49	Count	35.000	20.000	55.000
	% in row	63.636 %	36.364 %	100.000 %
50+	Count	32.000	16.000	48.000
	% in row	66.667 %	33.333 %	100.000 %
Total	Count	132.000	116.000	248.000

What is your age?		No	Yes	Total
	% in row	53.226 %	46.774 %	100.000 %

Chi-Squared Tests

	Value	df	p
X^2	10.076	3	0.018
N	248		

Figure 2

Contingency Table and X^2, "During NY Pause, did you find yourself furthering a prior hobby? For example, attempting to enhance your cooking ability."

What is your age?		No	Yes	Total
13-17	Count	22.000	72.000	94.000
	% in row	23.404 %	76.596 %	100.000 %
18-29	Count	12.000	39.000	51.000
	% in row	23.529 %	76.471 %	100.000 %
30-49	Count	22.000	33.000	55.000
	% in row	40.000 %	60.000 %	100.000 %
50+	Count	22.000	26.000	48.000
	% in row	45.833 %	54.167 %	100.000 %
Total	Count	78.000	170.000	248.000
	% in row	31.452 %	68.548 %	100.000 %

Chi-Squared Tests

	Value	df	p
X^2	10.777	3	0.013
N	248		

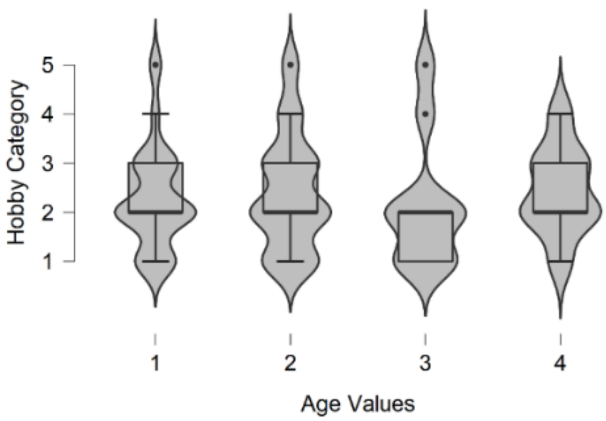
The results in Questions 1 and 5 show a contrast between the youngest two groups and the oldest two groups. In these questions, responses show that participants from 13-29 and 30+ have a difference in both if they picked up new hobbies and if they furthered a prior hobby during NYP. This suggests that the available time of the participant acted as an important factor as to if they had the ability to pick up a new hobby or further a prior one; while the oldest two groups have jobs full-time, the younger participants had no job, with school taking up the most time, allowing the younger participants to spend more time on recreation. On top of that, the younger age groups would be the only ones with a summer vacation, giving them even more opportunities to pick up a new hobby or further an already existing hobby.

Participants who answered that they did pick up a new hobby over NYP had to answer Question 2, asking the participant to describe the hobby or hobbies they picked up. After the researchers recorded them, the researchers categorized participant's responses into the five hobby categories, comparing the answers between the four different age groups (Figure 3). The responses show that overall, hobby category 2 (creative creation-based hobbies) saw the highest level of participation in all four age groups. When looking at the types of creative hobbies that participants picked up the most, no specific hobbies, or even types of creative hobbies, showed an overwhelmingly high level of participation. Rather, hobbies such as music, the arts, cooking, and gardening all saw about equal representation.

Participants took part in the other three hobby groups at a largely lesser rate, compared to creative hobbies, with physical and non-physical recreational activities having a similar frequency to one another, and with participation in academic and mixed hobbies being the least out of any type of hobby. The only exception to this trend is in Group 3 (30-49), in which participants took part in physical hobbies at a slightly higher rate than non-physical recreation, compared to the other groups.

Figure 3

The general distribution of newly picked up hobbies for each age group, including a violin element and outliers.

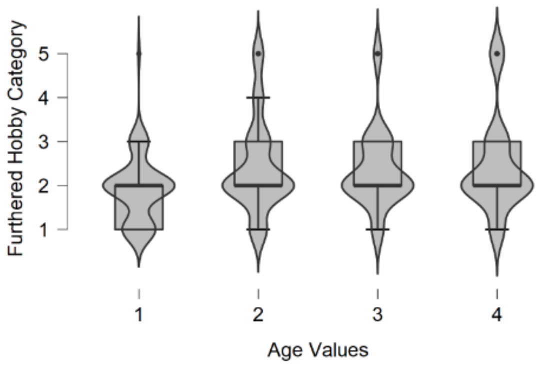


Participants who answered that they did further a prior hobby over NYP had to answer Question 6, asking the participant to describe the hobby or hobbies they furthered. After recording responses, they were placed into the five hobby categories and compared, similarly, to Question 2 (Figure 4). Groups 2, 3, and 4 (18+) all averaged a mean value between 2 and 3, signifying a strong number of creative hobbies in which they participated. Group 1, however, had an average below 2. The mean's value barely did not reach 2, being just below it, but this still signifies that Group 1 participated in physical recreation much more than the other age groups. It is evident that Group 1 participated in the most furthered physical activities out of all the three groups, but like every other group, creative hobbies made up the majority of those in which they participated.

Group 2 saw the most diverse balance between any of the other groups, with more than half of the members of that group participating in creative hobbies. Groups 3 and 4 saw a nearly as high rate of creative hobbies, with a bit under half of each group furthering creative hobbies.

Figure 4

Box plots that show the general distribution of furthered hobbies for each age group, including a violin element and outliers.



In both new and furthered hobbies, all age groups participated in creative hobbies the most. This category encompassed a myriad of activities, including the arts, music, and cooking. In fact, out of the 169 answers to Question 6, 38 included the word cooking, 14 included the word baking, and 5 other participants answered with cooking-related terms, 33.73% of the total responses to Question 6, giving those participants the benefits of a creative hobby.

The benefits from creative hobbies are vast. These hobbies assist in keeping good mental health, along with giving relaxation and an opportunity for escape (Adams-Price et al., 2017). Just these alone show factors that combat the dangers of NYP and the mere fact that at least 50% of each age group who furthered hobbies participated in one of these is already working in their favor. In addition, these hobbies give a sense of group and could be the reason so few participants furthered social hobbies, as participants already could have been comfortable in their ‘social’ hobby of choice. Furthermore, those who participate in these hobbies show improved self-esteem, and engaging in these hobbies induces a mental state more capable of fighting both mental and physical illness (Noice et al., 2004).

While these groups saw less participation, hobby categories 1, 3, and 4 all have their own benefits. Those who participated in physical activity saw a lessened risk of getting COVID-19 and other diseases (Jiménez-Pavón et al., 2020). Due to participating in physical hobbies the most, these benefits are likely more common for those in age Group 1 (13-17). The social and nonphysical recreational activity of the third hobby category has very similar benefits as the creative hobbies. Beranuy et al. (2012) found that videogames, the most common hobby in the social and nonphysical recreation category, had the same feelings of escape, sense of purpose, and feeling of being in a relationship, adding even more benefits to those who continued to participate in hobbies over NYP. As for the final category, academic, those who participated in academic recreation during NYP experienced an increase in cognitive skills, something largely beneficial to those at the oldest and youngest parts of the spectrum (Stewart, 2005). Overall, the furthering of hobbies during NYP clearly had significant benefits to those who participated in them.

Limitations

NYP lasted for a limited period, roughly from Spring 2020 to Fall 2020. Because of this, a limited timeframe existed for data collection, with the second trial happening right at the end of NYP, or right at the beginning of a new "hybrid period." The ethnically non-diverse sample population further limited the study; the three counties tested all have a large majority of Caucasians within their populations, which differs from the average demographics of the New York metropolitan area.

Future Works

One alternative path that future researchers could take with this study would be surveying the rest of New York State to see how the state picked up and continued hobbies during NYP. This also could create "state-wide" results that are more diverse and could address the issue of racial imbalance.

The next step in future works could be testing other states and how their populations picked up new hobbies during the months that NYP occurred. This could be interesting, as different states, such as Florida, had a very different experience with the reaction to COVID-19, compared to New York, with the possibility for wildly varying results.

Finally, moving away from the broader scale and toward modifying the study already conducted, asking about the hobby picked up would allow for results with more meaning, instead of gaining meaning from the literature. In this survey, if participants responded that they started playing basketball, the meaning would come from the fact that it is an athletic hobby, but a future survey could ask why the participants picked up a hobby.

Conclusion

Overall, the results show that, during NYP within this suburban New York population, males and females saw no significant difference in how they picked up or furthered hobbies, while younger and older participants saw a significant difference in the rate at which they picked up new hobbies and furthered prior hobbies, and in the types of hobbies they furthered. This means this study rejects the first part of the hypothesis, while it accepts the second part. These results suggest that traditional hobby differences between males and females had less of an impact during NYP, while the differences between age groups, such as time spent during jobs or school, or generational values, had much more of an impact on the leisure habits of New Yorkers during this period. These findings also imply that younger groups (such as those from 13-17 and 18-29) in this population would have adapted to the structure of NYP more easily, as they engaged in hobbies much more often than those 30 and older. These results also would be able to assist researchers in future exploration of the use of leisure time.

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Discussion Questions

1. In which way did people of different ages and genders participate in leisure during New York Pause?

2. Which groups participated in leisure more?

3. What type of leisure was most popular among different groups during this period in this sample of people?

4. What impact could these trends have on the return to normalcy from New York Pause?

To Cite this Article

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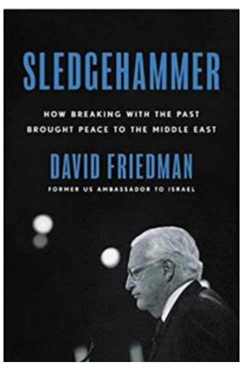
Editor's Choice

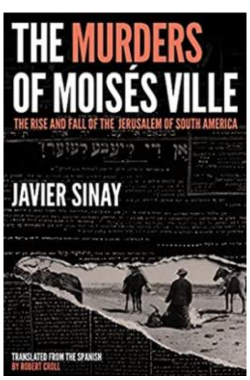
Jafia González
St. Thomas University

1. Friedman, D. (2022). *Sledgehammer: How Breaking with the Past Brought Peace to the Middle East.* New York, NY: HarperCollins, 272 pp., hardcover, $20.47, ISBN 978-0063098114.



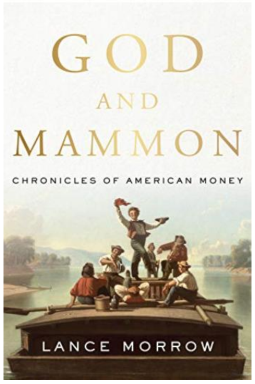
In *Sledgehammer*, Friedman tells the true story of how the Abraham Accords came about. He takes us from the Oval Office to the highest echelons of power in the Middle East, putting us at the table during the intense negotiations that led to this historic breakthrough. The inside story of arguably the greatest achievement of the Trump Administration, Sledgehammer is an important, inspiring account of the hard, hopeful work necessary to bring long overdue – and lasting – peace to one of the most turbulent and tragic regions of the globe.

2. Sinay, J. (2022). *The Murders of Moisés Ville: The Rise and Fall of the Jerusalem of South America*. Brooklyn, NY: Restless Books, 288 pp., hardcover, $28.00, ISBN 978-1632062987.



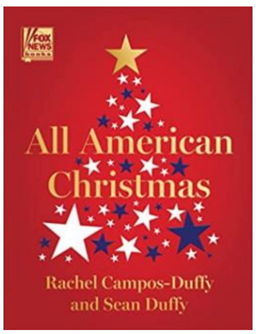
When Argentine journalist Javier Sinay discovers an article from 1947 by his great-grandfather detailing twenty-two murders that had occurred in Moisés Ville at the end of the nineteenth century, he launches into his own investigation that soon turns into something deeper: an exploration of the history of Moisés Ville, one of the first Jewish agricultural communities in Argentina, and Sinay's own connection to this historically thriving Jewish epicenter.

3. Morrow, L. (2020). *God and Mammon: Chronicles of American Money*. New York, NY: Encounter Books, 176 pp., hardcover, $24.99, ISBN 978-1641770972.



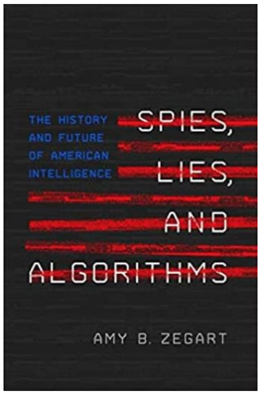
Award-winning essayist Lance Morrow writes about the partnership of God and Mammon in the New World – about the ways in which Americans have made money and lost money, and about how they have thought and obsessed about this peculiarly American subject. Fascinated by the tracings of theology in the ways of American money, Morrow sees a reconciliation of God and Mammon in the working out of the American Dream.

4. Campos-Duffy, R. & Duffy, S. (2021). *All American Christmas*. New York, NY: HarperCollins, 272 pp., hardcover, $15.95, ISBN 978-0063046641.



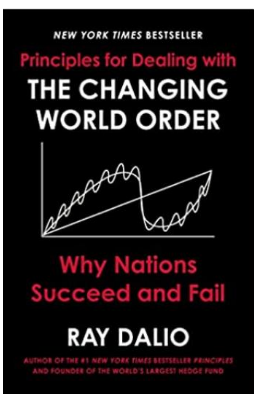
From the wind-swept, snowy ranges of Wyoming to Florida beaches glowing with Christmas lights, All American Christmas traces holiday traditions across the United States. In this beautiful personal keepsake, Rachel Campos-Duffy and Sean Duffy present a dazzling collection of emotional stories, treasured family photographs, and homegrown Christmas recipes from some of Fox News' most beloved personalities.

5. Zegart, A. B. (2022). *Spies, Lies, and Algorithms: The History and Future of American Intelligence*. Princeton, NJ: Princeton University Press, 424 pp., hardcover, $24.49, ISBN 978-0691147130.



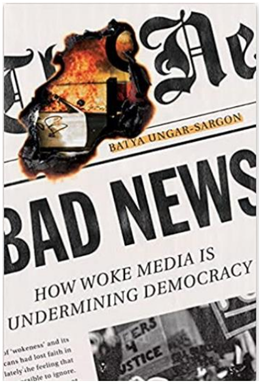
Drawing on decades of research and hundreds of interviews with intelligence officials, Zegart provides a history of U.S. espionage, from George Washington's Revolutionary War spies to today's spy satellites; examines how fictional spies are influencing real officials; gives an overview of intelligence basics and life inside America's intelligence agencies; explains the deadly cognitive biases that can mislead analysts; and explores the vexed issues of traitors, covert action, and congressional oversight. Most of all, Zegart describes how technology is empowering new enemies and opportunities, and creating powerful new players, such as private citizens who are successfully tracking nuclear threats using little more than Google Earth. And she shows why cyberspace is, in many ways, the ultimate cloak-and-dagger battleground, where nefarious actors employ deception, subterfuge, and advanced technology for theft, espionage, and information warfare.

6. Dalio, R. (2021). *Principles for Dealing with the Changing World Order: Why Nations Succeed and Fail*. New York, NY: Simon & Schuster, 557 pp., hardcover, $21.00, ISBN 978-1982160272.



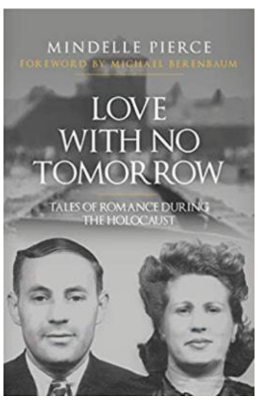
In this remarkable and timely addition to his Principles series, Dalio brings readers along for his study of the major empires—including the Dutch, the British, and the American—putting into perspective the "Big Cycle" that has driven the successes and failures of all the world's major countries throughout history. He reveals the timeless and universal forces behind these shifts and uses them to look into the future, offering practical principles for positioning oneself for what's ahead.

7. Ungar-Sargon, B. (2021). *Bad News: How Woke Media Is Undermining Democracy*. New York, NY: Encounter Books, 280 pp., hardcover, $21.49, ISBN 978-1641772068.



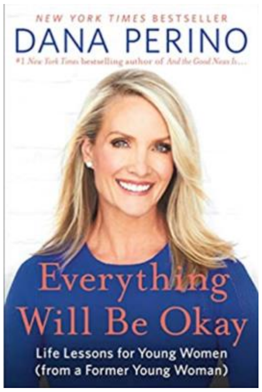
In *Bad News: How Woke Media Is Undermining Democracy*, Batya Ungar-Sargon reveals how American journalism underwent a status revolution over the twentieth century--from a blue-collar trade to an elite profession. As a result, journalists shifted their focus away from the working class and toward the concerns of their affluent, highly educated peers. With the rise of the Internet and the implosion of local news, America's elite news media became nationalized and its journalists affluent and ideological. And where once business concerns provided a countervailing force to push back against journalists’ worst tendencies, the pressures of the digital media landscape now align corporate incentives with newsroom crusades.

8. Pierce, M. (2021). *Love with No Tomorrow: Tales of Romance During the Holocaust*. Gloucestershire, U.K.: Amberley Publishing, 288 pp., hardcover, $25.79, ISBN 9781398108301.



These are extraordinary stories of love affairs during the most dangerous, degrading, and deadly conditions of genocidal persecution. The extreme lengths to which two people will go to express their love, and the superhuman strength that is derived from such love, is the stuff of miracles and endless inspiration. This little-known aspect of the Holocaust, seen through the eyes of those in love, is a unique contribution to our understanding of the best and the worst qualities of human nature. This book must be read by anyone who wants to know more about life and love enduring the most horrendous conditions one could imagine.

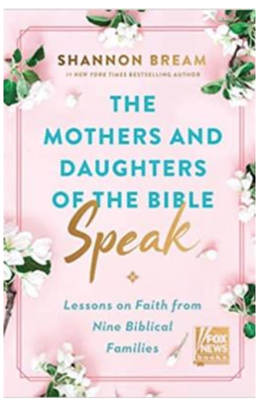
9. Perino, D. (2021). *Everything Will Be Okay: Life Lessons for Young Women (from a Former Young Woman)*. New York, NY: Twelve, 240 pp., hardcover, $14.20, ISBN 9781538737088.



Everything Will Be Okay is a no-nonsense how-to guide to life for young women looking to reframe their thinking, to believe in themselves, to take risks, to understand their power, and to feel better overall through finding serenity and taking action.

Young women seek out advice from Dana Perino every day—at work, through friends, and on social media. The story of her own quarter-life crisis, *And the Good News Is… Lessons and Advice from the Bright Side*, brought countless readers to her inbox looking for guidance. Through her mentorship program, "Minute Mentoring," Dana quickly realized that quarter-life crises have begun following young women well into their thirties. Many of them are distressed but conceal it with a brave face. Unfortunately, too much of that can be—and is—exhausting.

10. Bream, S. (2022). *The Mothers and Daughters of the Bible Speak: Lessons on Faith from Nine Biblical Families.* New York, NY: HarperCollins, 288 pp., hardcover, $17.54, ISBN 9780063225886.



In *The Mothers and Daughters of the Bible Speak*, Shannon Bream examines the lives of biblical women to see how God's plans can turn worlds upside down. She tells the story of Jochebed, a mother who took enormous risks to protect her son, Moses, from Pharaoh. Could Jochebed, have imagined that God's actual design for her son involved flight into exile and danger? And yet this was all part of the master plan to deliver Israel from slavery. Another biblical mother, Rebekah, made terrible choices in an attempt to ensure her son's place in history. And a daughter, Michal, struggled to keep her faithless father, Saul, from sin, while battling pride in herself.

Through these stories, Shannon explains the intimate connection between faith and family—and how God's unexpected agenda can redefine the way we think about family.

To Cite this Editor's Choice

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Compiled by Raúl Fernández-Calienes

By Author

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