

# Methods

## Yoga: Theory and Practice—A Course that Illustrates Why Yoga Belongs in the Academy

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### Abstract

The course “Yoga: Theory and Practice” (YTP) evolved from the realization that although graduate and undergraduate academic yoga course offerings were filled beyond capacity with waitlists, students were often not being exposed to the depth and breadth of yoga as a holistic, integrative health practice. In the authors’ experience, students experientially understood the contribution that yoga practice made in their lives and sensed the health benefits it afforded, yet they were hungry for the scientific evidence for using yoga to address various clinical conditions and to understand why yoga felt like a grounding practice. Students wanted scientific evidence for what they experientially knew to be true: Yoga helped them feel more grounded in their bodies. In 2004, when YTP was designed, college yoga courses were typically in departments of physical education, and little to no attention was given to the theoretical/philosophical roots behind *why* yoga is practiced. This is no longer the case. YTP is an elective within an academic minor of study, Integrative Approaches to Health and Wellness, and the course offers college students an in-depth, academic study of yoga that incorporates both scientific (reductionist) and holistic health perspectives. The clinical/educational objective of this course is to expose university students (including those studying to become healthcare professionals) to the evidence-based integrative health benefits that yoga and yoga therapy have been shown to provide. Using the university’s educational setting provides a venue to augment the future use of yoga in healthcare. Klatt & Webster. *Int J Yoga Therapy* 2019(29). doi: 10.17761/2019-00022.

**Keywords:** yoga in academics, higher education, yogic philosophy, Integrative Approaches to Health and Wellness

### Background and Etiology of the Course

“Yoga: Theory and Practice (YTP),” a 3-credit academic course within a higher education institution, aims to provide a thought-provoking understanding of yoga in both historical and scientific contexts. Through a holistic lens, the course approaches yoga as an ancient philosophy that connects the mind and body. The course also considers yoga through a reductionist lens, as an emerging addition to western healthcare prompted by growing research on the evidence-based benefits of mindfulness, yoga, and yoga therapy. This course advances the integration of yoga into the academy and offers a curricular model for other institutions of higher education to use and modify according to the future direction of the growing “yoga in healthcare” research literature. A call has been made to develop rigorous ways to further the implementation of yoga and yoga therapy into healthcare systems,<sup>1</sup> and the methodology presented here (a yoga course in higher education that focuses on experiential practice, scientific evidence, and the history and philosophy of yoga) is one attempt to answer this call.

This course evolved from the realization that graduate and undergraduate academic yoga course offerings were filled beyond capacity with long waitlists, while admitted students were not being exposed to the depth and breadth of yoga as a holistic, integrative health practice. In the authors’ experience, students experientially understood the contribution that yoga practice made in their lives and sensed the health benefits it afforded, yet they were hungry for the scientific evidence for using yoga to address various clinical conditions. Students wanted scientific evidence for what they experientially knew to be true: Yoga helped them feel more grounded in their bodies, addressed musculoskeletal issues, and helped them to feel more “like themselves” by inviting them to be part of something beyond themselves.

In 2004, when YTP was designed, college yoga courses were typically in departments of physical education; the theoretical/philosophical roots behind why yoga was practiced and the scientific research supporting its use in integrative healthcare were given little or no attention in these courses. This is changing, as many courses within physical education departments now include scientific background for students. YTP was developed as a part of larger vision of integrative mind-body medicine and is now offered as an elective course within an academic minor of study, Integrative Approaches to Health and Wellness, at a Big Ten University in the United States. The focus of YTP is to offer college students an in-depth, academic study of yoga, incorporating both scientific (reductionist) and holistic health perspectives. A course of this nature is both underrepresented in higher education and necessary in traditional university settings to increase the likelihood of yoga and/or yoga therapy becoming an integral offering within conventional healthcare. The students in YTP are exposed to concepts and evidence supporting yoga as therapy. Many of these students will be our healthcare providers of the future, whereas others may become corporate managers who decide what types of wellness programming are offered their employees.

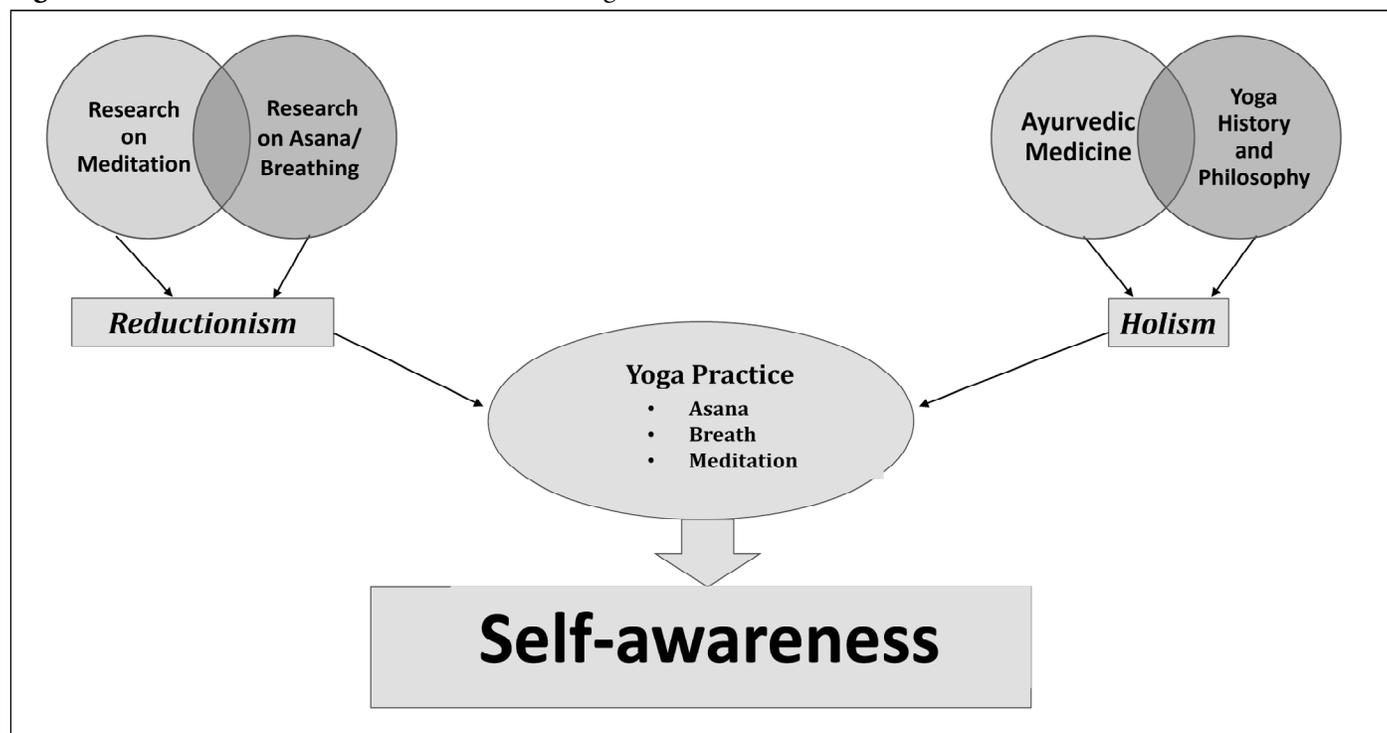
One objective of YTP is to increase the use of yoga and yoga therapy within healthcare and wellness programming by exposing university students to the experience of and science behind yoga. Over the last 15 years, an average of 30%–45% of students registered for YTP were from pre-health academic majors (pre-med, nursing, pre-occupation-

al therapy, pre-physical therapy, etc.), with the remaining students from a wide range of academic majors. These other majors included business management, engineering, and various forms of the arts, with each student potentially being in the position to use yoga for their own approach to wellness and/or in their future work environments. Evidenced-based practice has become the mantra of much of healthcare education and beyond, so it is critical to provide this background within higher education for those studying to be healthcare providers and for all students, who may choose yoga/yoga therapy as part of their overall approach to wellness and health. Students not studying to become healthcare professionals also benefit from being exposed to the scientific background of yoga for their own personal and/or professional use within the workplace, as yoga has entered settings as diverse as corporate boardrooms, law firms, and so on.<sup>1</sup> This article provides the course syllabus for YTP, along with preliminary data from students' reflective practices and suggestions for ways to validate that students are informed by this curricular content following matriculation.

### Salient Features and Nature of the Course

The YTP course has two weekly components: A 90-minute lecture and a 90-minute yoga practice are intended to provide a foundation for a personal yoga practice built on the two pillars of reductionism and holism, eventually leading to a greater sense of self-awareness (Fig. 1).

**Figure 1.** Essential Elements of Overall Course Design



For some students, the concept of self-awareness is novel, whereas for others, current sustained practice in self-awareness has allowed them to uncover their place in a larger reality. A goal of the course is not self-betterment, but enhanced self-awareness. YTP allows students to begin their yoga journey from where they are, whether they are new to yoga or have a well-established daily practice. Providing the scientific evidence on the effects of yoga and meditation encourages some students to try the experiential aspects of the practices that they might have avoided in the past.

Course assignments are tied to the salient features of both reductionist and holistic paradigms of healing. Assignments relating to reductionism include readings on topics such as meditation and brain function/attention,<sup>2</sup> yoga research regarding musculoskeletal conditions,<sup>3</sup> and yoga for chronic low back pain.<sup>4</sup> Scientific articles such as these are updated annually to reflect current findings. Assignments related to holism include reflective writings on mindfulness practice in response to prompts relating to two of the texts focusing on dharma and purpose. The texts used in YTP reflect a combination of reductionist and holistic thinking.<sup>5-7</sup> Integration of both themes is also emphasized in the remaining assignments: an exploration of the western split between mind and body, completed as a roadmap of each student's personal history of the mind-body split; viewing the film *The Connection*<sup>8</sup> (on mind-body medicine) and answering reflective questions eliciting self-awareness; and a final presentation demonstrating the student's understanding of dharma (purpose) and the encapsulation of lessons learned (and value garnered) from course content. The course syllabus details for students the interplay between reductionist ways of examining the efficacy of yoga and the holistic experience of yoga (Fig. 2). Students understand from course registration that both the theory and practice of yoga will be examined from an academic viewpoint and that all assignments reflect such interplay.

### Emerging Research on Mindfulness Meditation

Some students are surprised at the experiential nature of the meditation within the practice portion of the class. Thus, the emerging science on the benefits of meditation for attention is a focus at the beginning of the semester. (Students realize they need enhanced attention skills to perform well in their studies.) Although the benefits of practicing mindfulness meditation have been written about throughout the ages, scientific research to back up its mental and physical health benefits is necessary for the general population to accept meditation as a valid addition within both education and healthcare. A study investigating the relationship between mindfulness and higher-order thinking processes (e.g., executive functioning and critical thinking) in university students suggests that dispositional mind-

fulness facilitates performance, mediated by the inhibition component of executive functioning.<sup>9</sup> Such work paves the way for future research into this complex relationship. In our experience, students are drawn to research that suggests becoming more mindful may help them succeed in academic study.

Mindfulness meditation is not a recent practice for dealing with the difficulties of life, but its emergence in western society as a potential treatment for anxiety and depression is a phenomenon that began with Jon Kabat-Zinn's Mindfulness-Based Stress Reduction (MBSR) program in the 1990s.<sup>10</sup> Rates of depression and anxiety within college-aged students are a growing concern,<sup>11</sup> and the students themselves may see a need to become more self-compassionate in a society that does not typically teach self-compassion but teaches (and often rewards) competitive behavior. Yet a recent meta-analysis<sup>12</sup> confirmed that for adolescents (including late adolescents who are college-aged), an inverse relationship exists between self-compassion and psychological distress, indexed by anxiety, depression, and stress. This finding replicates those in adult samples; college students resonate with findings such as these but may not have learned strategies like yoga and meditation, which may help mitigate the effect of psychological distress.

Increases in funding and research positions also indicate a societal interest in confirming the benefits of meditation. The Center for Healthy Minds in Madison, Wisconsin, received \$1.5 million USD in the last decade for producing research on "well-being, socio-emotional skills, and the impact of mindfulness on learning."<sup>13</sup> In addition to funding for research, the 2017 hiring of a chief research officer at the Kripalu Center for Yoga & Health<sup>14</sup> indicates the perceived need for research to validate specific outcomes in health and wellness related to all aspects of yoga and yoga therapy, including meditation.

### Emerging Research on Asana

As many college students spend hours sitting in front of a computer and will likely graduate into workplaces with little physical activity, the physical aspect of yoga (focusing on balance, flexibility, and strength) has a significant role in this course. Thus, research reviewed in YTP includes studies such as one in which Thai yoga training was shown to considerably enhance flexibility and range of motion.<sup>15</sup> In another study examined in the course,<sup>4</sup> yoga appeared to minimize missed days of work in populations with musculoskeletal conditions, potentially saving more than \$2,000 USD per employee per year. Students need to review such research, as these findings are imperative in convincing employers of the benefits of yoga as a treatment for back pain, and in shifting American culture away from reliance

**Figure 2.** Course Materials and Assignments Used to Meet Course Objectives

<b>Course Details</b>	Yoga Theory and Practice, Course #5175 3 Semester Credit Hours	
<b>Instructor</b>	Maryanna Klatt, PhD, RYT Professor, Family Medicine Ohio State University College of Medicine e-mail: maryanna.klatt@osumc.edu	
<b>Course Description</b>	A 90-minute lecture and 90-minute practice/week investigating the development of yoga, and its applications to modern health and wellness.	
<b>Rationale</b>	This course will provide students an opportunity to academically explore the theory and philosophy behind the practice of yoga, and to be exposed to the scientific research explicating the benefits of yoga practice. This course will further the learner's knowledge of the historical and health benefits of yoga from within the cultural context in which it was born, extrapolating such knowledge to our current western experience of the body, and to yoga practice in the west today. This is an academic 3 credit-hour class examining the evidence-based health benefits that yoga practice can afford.	
<b>Goals and Objectives</b>	Upon successful completion of this course, students will have: <ol style="list-style-type: none"> <li>1. Examined the cultural, spiritual, and health paradigms underlying yoga,</li> <li>2. Furthered their research knowledge of the health benefits of yoga,</li> <li>3. Critically examined western and nonwestern notions of health and wellness,</li> <li>4. Furthered their own yoga practice of asanas, concentrating on the meditative benefits available to them (practice portion of class),</li> <li>5. Examined "mindfulness" as a western adaptation of nonwestern notions of centeredness,</li> <li>6. Explored the physical benefits of yogic breathing practices (practice portion of class),</li> <li>7. Attempted to understand the essence, and possibilities, of the health benefits of a yogic lifestyle within a western cultural context, and</li> <li>8. Evaluated if the principles and/or the practice of yoga may be an avenue that they desire to adopt in their own approach to health and learning.</li> </ol>	
<b>Content</b>	<p><u>Practice portion:</u> Active and restorative yoga asana (poses) with focus on alignment and meditation; pranayama (breathing techniques) and breathing anatomy; meditative techniques including mindfulness meditation.</p> <p><u>Theory portion:</u> Yoga history and philosophy; yogic understanding of the physical and energetic body; applications of yoga philosophy and practice to modern wellness; stress physiology and yoga; ayurveda (traditional Indian medicine) and eastern views of health; ayurveda and yoga, yoga practices used to address specific disease states, and yoga as a means to answer the question, "Who am I"?</p>	
<b>Methods</b>	<ul style="list-style-type: none"> <li>• Lecture, including large and small group discussions and active learning assignments regarding the lecture material</li> <li>• Physical yoga and breathing practices</li> <li>• Participation in both theory and practice components of class</li> <li>• Assigned readings</li> <li>• Home experiment with yogic practices and journaling</li> </ul>	
<b>Course Materials</b>	<b>Material Type</b>	<b>Objective(s) Supported</b>
Khalsa, S. B. S., Cohen, L., McCall, T. B., & Telles, S. (Eds.). (2016). <i>The principles and practice of yoga in health care</i> . Pencaitland, UK: Handspring Publishing.	Text	<ul style="list-style-type: none"> <li>• Explore scientific research conducted on the health benefits of yoga.</li> <li>• Explore health benefits of a yogic lifestyle within a western cultural context.</li> <li>• Evaluate if the principles and/or the practice of yoga may be an avenue that they desire to adopt in their own approach to health and learning.</li> </ul>
Cope, S. (2012). <i>The great work of your life: A guide for the journey to your true calling</i> . New York: Bantam Books.	Text	<ul style="list-style-type: none"> <li>• Further one's practice of self-awareness.</li> </ul>
Kabat-Zinn, J. (1994). <i>Wherever you go, there you are: Mindfulness meditation in everyday life</i> . New York: Hyperion.	Text	<ul style="list-style-type: none"> <li>• Examine "mindfulness" as a western adaptation of non-western notions of centeredness.</li> </ul>
Harvey, S. (2014). <i>The connection: Mind your body</i> . United States: Elemental Media.	Film	<ul style="list-style-type: none"> <li>• Critically examine western and non-western notions of health and wellness.</li> </ul>

(continued on next page)

**Figure 2.** *continued*

Graded Elements of the Course	Assessment Type
Body-mind journey Chapter outline/presentation of specific health condition	Visual representation of the student's journey thus far in terms of how their body and mind have impacted one another, optional presentation to class Outline of scientific studies addressing a specific health condition presented to class
Midterm exam	Objective and essay questions covering the scientific evidence behind yoga
5-page essay on <i>The Great Work of Your Life</i>	Written evidence of self-awareness via the personal exploration of one's dharma
Prepared participation	Active participation in discussion of preassigned readings
Guided journal entries on <i>Wherever You Go, There You Are</i> and essay	Written evidence of self-awareness in applying mindfulness in a pragmatic way
Final pecha kucha presentation	Class presentation of one's dharma via the 6-minute, 40-second template: <a href="https://globaldigitalcitizen.org/how-to-make-great-presentations-with-pecha-kucha">https://globaldigitalcitizen.org/how-to-make-great-presentations-with-pecha-kucha</a>

on pharmaceutical answers and toward the integration of movement (such as yoga) within the workplace.

Although there are some direct relationships recognized regarding yoga and health, much remains to be established. In 2012, Marshall Hagins and Sat Bir Khalsa called for a connection between yoga therapy in practice and the scientific research regarding it<sup>16</sup>; the course YTP may be a methodology for answering this call within the university educational setting. Students need exposure to the research conducted thus far to learn what has been shown to be effective while learning about the scientific method applied to an integrative therapy such as yoga. This enlarges student knowledge as to the success and limitations of using western scientific methodology to investigate practices intended to be holistic in nature while potentially igniting their imagination to design future research studies. Students need to be able to understand and use the language of the scientific community and a personal, holistic understanding of yoga practice itself. YTP provides that integration.

### Emerging Research on Integrative and Ayurvedic Medicine

With a paradigm shift in U.S. healthcare occurring in the last 20 years, ayurvedic medicine has made a gradual appearance in complementary and integrative practices. As Vedic beliefs, both yoga and ayurveda serve as mind-body healing techniques to prevent and address disease.

Students are introduced to one particularly impressive study in which the Banerji protocol from India showed a reduction in cancer in 30%–52% of patients using only homeopathic remedies that promote immune system function while targeting cancer cells.<sup>17</sup> Students in the YTP course had no awareness that research such as this was being conducted, nor the published results of such work. This work seems to align with the foundation of immunotherapy, which has only recently been in the spotlight as a possibility for cancer treatment in the western scientific commu-

nity. Exposure to international research emerging from other healthcare systems may prove enlarging yet challenging for students and further makes the point that there are various approaches and systems of health and wellness in the world.

The Banerji protocol is then compared to the western research literature that details a growing body of randomized controlled studies examining the physiological and psychosocial benefits of yoga therapy integrated into cancer treatment. In one study, breast cancer patients and healthcare practitioners alike seemed eager to integrate yoga therapy into their healthcare routine.<sup>18</sup> Timothy McCall, MD, C-IAYT, advocates for holistic medicine and yoga therapy and stresses that although western culture often assumes that conventional medical treatments work better, holistic approaches such as Ayurveda and yoga therapy can be far more effective in addressing chronic conditions that require behavioral changes.<sup>19</sup> He calls for thinking about health and wellness in a different way, one that allows for holistic approaches to be incorporated with conventional western treatments.

### Importance of Teaching Yogic Philosophy and History

Just as a shift is occurring in healthcare toward acknowledgment of the benefits of integrative approaches to healing, higher education is subtly shifting toward including instruction in contemplative practices. Contemplative practices have been employed at various universities in all levels of healthcare professional education<sup>20</sup> and in undergraduate honors courses,<sup>21</sup> hopefully producing more compassionate and open-minded future professionals.

The call for more compassionate and emotionally intelligent healthcare providers is not new. A 2013 study by healthcare professionals at Boston University pointed out the discrepancy between the need for empathetic and emotionally available physicians and the process of medical school, which routinely values competition and the ability

to withstand long hours over patient-centered care.<sup>22</sup> The study revealed a need for a mind-body course for medical students to manage the stresses of the medical culture and improve self-compassion and compassion for others, including patients.

Moon<sup>23</sup> argues that although the literature includes differing definitions of *reflection*, various thinkers support the idea that reflection serves to generate knowledge. Philosophers such as John Dewey focus on the process of reflective thinking as enhancing one's education, whereas others emphasize the role of reflection in the acquisition of knowledge. Reflection may play a part in both functions.

The long-term success of integrating self-reflective teachings and assignments was demonstrated in 2014 in a university neuroscience course.<sup>24</sup> For extra credit, students could progress through a series of "personal brain investigations" in which they used Buddhist skills such as nonjudgment, self-inquiry, and letting go. In a 1-year follow-up, students who completed the assignment demonstrated better stress-management abilities and remembered course material better than those who did not complete the extra-credit assignment.

Another study demonstrating the effectiveness of mindfulness-based science courses in higher education was conducted at the University of Redlands.<sup>25</sup> This course, "Neuroscience of Meditation," tracked student progress on measures such as attitude toward science and perceived barriers to meditation. Results showed significant improvements in attitudes toward science, even in students outside of the neuroscience major, and increased presence of a personal meditation practice in the absence of barriers. Overall, this course illustrated the usefulness of mindfulness education, especially in demanding majors such as neuroscience.

Barbezat et al.<sup>26</sup> argue for the necessity of contemplative education in the western world, noting that higher education in America produces high volumes of intelligence and knowledge but no sense of responsibility, personal morals, or beliefs. In light of such considerations, YTP examines both reductionist and holistic approaches, and the philosophy and history of yoga are equally important components of the course. It is the philosophical principles taught in the course that serve as the core of self-assessment and integration of yoga into daily life.

## Course Outcomes

An intended outcome of this course included students beginning or continuing a personal yoga practice with an increased sense of self-awareness. Figure 2 details the written assignments and assessments in which students demonstrated increased self-awareness. Additionally, their science-based knowledge of mindfulness and the health benefits of

yoga were assessed: Students were tested on these concepts via a midterm exam and performed well on the objective examination, consistently scoring in the 89%–98% range. The process of self-evaluation and self-awareness, along with a deepened mindfulness and physical yoga practice, was evident in the students' written reflections submitted during each semester. Table 1 lists some of the prompts and representative student reflective writing samples illustrating increased self-awareness.

## For-Credit, Traditional University Setting

One of the main facets of the success and importance of this course is that it is offered at a traditional academic university. When offered as a course for credit at an institution of higher learning, a course such as YTP has the opportunity to reach a broad student population that will grow into the working population of tomorrow. The average college student may enter YTP with a preconceived notion about what yoga is; this course showcases the historical, philosophical, and scientific knowledge of yoga. The average college student also faces the continuing stressors of life without a regular yoga, mindfulness, or self-awareness practice, so the skills offered in this course are invaluable. Since the first YTP course in 2004, students have commented on its impact on their personal college experience.

Students from all academic majors have the opportunity to take YTP, which enlarges the future benefit of the course to affect society in a multitude of ways. Students majoring in business or human resources comment on how they envision bringing the benefits of yoga in the workplace to their future employers, whereas education students comment on their intentions to use the meditative, breathing, and movement components of yoga to benefit their future classrooms.

The pre-healthcare professional students are especially vocal regarding their hopes of integrating yoga, breathing, and mindfulness while working with future patients and colleagues. The students in YTP include future nurses, physicians, and even politicians—the professionals who will be making decisions about healthcare. With YTP offered to students who are at a transformative age, our healthcare system may see a greater integration of these practices, but this requires assessment. Do students of YTP continue to engage in a personal practice, and do they use the techniques they have learned (with the evidence behind those approaches) to inform their decisions as professionals? These suggested critical longitudinal research questions need to be explored to assess the long-term benefits of such a course.

## Offerings at Other U.S. Universities

A search for similar courses in higher education produced several types of results. The first main category was an array

**Table 1.** Examples from Assigned Reflective Practice Encouraging Self-Awareness

Prompt	Representative Writing Excerpts
<p>I would like you to watch your breath, be aware of your breath for 5 minutes before you go to sleep, and for 2 minutes when you wake up for the next 5 days. This means starting your day with awareness, and ending your day with awareness. Towards the end of this assignment, I want you to notice if this changed your week in any way. Please describe your experience with this activity.</p>	<p><i>I see the day ahead now like painting on a blank canvas: it's up to me how I want to treat the base of that painting. A clean, smooth even wash or a patchy one. This small exercise helped remind me of how I want to go through life.</i></p> <p><i>In the morning, I could focus more effectively because my head was much clearer after a good night's sleep. Taking the time to breathe at the start of the day was like reminding myself of ME, of who I am. Those few minutes of attention served as a constant reminder throughout the day that what I had to do, I had to do it for myself, for my work, and for my goals.</i></p>
<p>Set aside 5 minutes a day to meditate during the next 3 days. Could you do it? What was it like? Was it long enough for you? How did you transition? What did you struggle with?</p>	<p><i>Five minutes seemed long in the beginning but now I look forward to my meditation session. I struggled with keeping myself focused on breathing. But now I can totally do that. It's that time of the day, when I fall in love with myself for having grown a tiny bit from what I was the previous day. It's like looking deep into the eyes of my soul and getting lost in that deep, endless ocean and bouncing back and forth with every wave that hits you. Now, I love the way I feel in the morning, ready to face the day with a new energy boost!</i></p>
<p>Try sitting in the mountain meditation for 5–10 minutes for 3 days in a row. What accounts for “bad weather” on your mountain? What is your emotional life like in terms of your mountain image?</p>	<p><i>Thinking of myself as a mountain, firmly grounded into the Earth, standing still and yet bringing about so much change in its surroundings. A mountain blocks heavy clouds and brings rains to the hot, dry lands. Mountains create vantage points on [their] peaks to overlook the valleys and huge expanses of lands . . .</i></p> <p><i>When I picture myself as the mountain, I feel the lotus position of my legs brings stability at the base. The erect posture and the straight back is like the core of the mountain, the brain being the peak. The winds, clouds, the outside weather changes all the time, but the base (the grounded reality), and the core, are constants.</i></p>
<p>What do you think of the statement that the only way to change the world is to change yourself? What does your yoga practice have to do with this?</p>	<p><i>If you don't change yourself, the world can't really change. We'll just continue to perpetuate bad habits and cycles that other people might copy because they think it's ok to do them, too. This means we have to be models of who we want to be, of what we want the world to be like.</i></p> <p><i>This starts in yoga practice, with ourselves. Yoga practice is one of the few times I get to be alone with my thoughts and feelings. I get to be with myself and no one else. Sometimes that's hard and uncomfortable, but being able to sit in stillness and breathe with yourself is the key to being able to be still and breathe with others.</i></p>
<p>Take a 10-minute loving-kindness meditation. Is it easier to do this towards yourself or others? Why?</p>	<p><i>We are our own worst critics. When I think of myself, it's easy to be negative, to think of all the ways I wish I were better. Even realizing that I was struggling to direct loving-kindness towards myself made me judge myself more! But when I'm really patient with myself and give myself time to let go of those negative emotions, I find loving-kindness towards myself to be really helpful in calming my fears and anxieties.</i></p>
<p>If you had to summarize your “job on the planet earth with a capital J,” what would it be?</p>	<p><i>My unique contribution to Life would be to make it a better place or rather leave it in a better condition than I originally found it in . . . The earth has provided us with such beautiful elements to enjoy, I would consider it my honor to be able to give back all that I had from the earth. As a landscape architect, my conscience will always guide me towards maintaining the balance within the ecology and planting as many trees as possible.</i></p>

of yoga teacher training programs and yoga institutes, completely separate from undergraduate or graduate courses at established non-yoga universities. The second group of results contained recreational sports offerings at large universities, usually offered to all students on a weekly basis but not applicable for course credit. It is also important to note that a number of university physical education courses (applicable for course credit) may now contain a science-based or philosophical component. However, the context in which the YTP course is provided (as an elective within an Integrative Health Approaches minor, and for 3 credits compared to 1) provides the bandwidth to dive more in-depth and to reach both prospective healthcare professionals and the general undergraduate student population. Refining the search criteria resulted in some examples of courses in higher education that offer yoga in a physical, philosophical, and scientific manner:

1. Lesley University—Yoga: Theory, Culture and Practice offered through the College of Social Sciences. This course incorporates the physical practice, psychological and philosophical viewpoints, and applications to the students' lives.<sup>27</sup>
2. University of Virginia—Yoga Philosophy: Beyond the Poses. The course offers physical practice combined with the philosophical eight limbs of yoga.<sup>28</sup>
3. University of Minnesota—Yoga: Ethics, Spirituality, and Healing. The course combines physical practice with scientific evidence of yoga's health benefits, along with the philosophical aspect.<sup>29</sup>
4. DePaul University—Body, Mind, Spirit: Yoga and Meditation. Includes scientific research, personal practice component, and spiritual development.<sup>30</sup>
5. University of St. Thomas—Yoga for Therapy. Educates students on therapeutic uses of yoga for psychological conditions as well as the contemplative nature of personal yoga practice and the neuroscience background of yoga.<sup>31</sup>

Although this nonexhaustive list of courses in higher education at traditional universities appears well-rounded, such courses are not commonly found across universities. What makes the present course unique can be demonstrated by its consistently high assessment results compared to the average 4.5/5 rating for comparable courses offered at the same university. This is underlined by the post-course student feedback: The course ranked highly in multiple criteria when anonymously evaluated by enrolled students at the end of each semester (Table 2).

**Table 2.** Student Course Evaluations\*

	Mean Response	Standard Deviation
Student's sense of their own learning: Course was intellectually stimulating	4.70	0.51
Student's sense of their own learning: Course encouraged independent thinking	4.81	0.43
Student's sense of their own learning: Course had a learning atmosphere	4.84	0.39
Overall course rating for meeting stated objectives	4.78	0.46

\*Likert response scale, with 5 being high and 1 being low.  $n = 175$ , with an 82% response rate.

More anecdotally, two previous students, one in graduate school and one a practicing health professional, detailed the effect of YTP on their personal and professional lives:

I took Yoga Theory and Practice because I wanted to improve my yoga practice. What I found from this class was so much more. Learning about yoga theories, its history, and science behind the movements and breath has been instrumental in my personal and professional life. As a Public Health graduate student and practitioner, it was especially important for me to understand the scientific underpinnings of this practice in depth in order to involve yoga and mindfulness in my work. This class provided me with the background I needed to effectively communicate the benefits and biological processes of yoga to groups that participate in these types of interventions. Furthermore, what I learned from this class has given me insight into my own behavioral patterns, habits, and thoughts. My yoga and meditation practice has expanded and become more meaningful [and] purposeful, which shows me the importance of self-care and balance (former YTP student, personal communication, January 2019).

Through the course Yoga Theory and Practice I learned that yoga can be used as a form of, and in conjunction with, medicine. It opened my eyes to the realm of integrative medicine and how it can be used in my future profession as an occupational therapist. Yoga Theory and Practice discussed research articles featuring yoga and the resulting health benefits. It is important to note that the history and background of yoga is essential in its application to healthcare. This course also taught me

a lot about mindfulness and the ability to make clearer decisions when employing it in daily life. Yoga and mindfulness allow space for individuals to find the lifestyle that impacts their body and mind in a healthful way via a deeper presence in the body. Being truly present and aware of how I am living my life has made an incredible impact on the type of person I have become since taking this class. Five years later, I am in OT school and planning my doctoral experience: yoga as an intervention for fall prevention for older adults (former YTP student, personal communication, November 2018).

These testimonies align with the statistics collected over 10 semesters of offering YTP; the course provides a practical understanding of yoga therapy, a space to explore personal depth, and a traditional classroom setting that promotes learning and achieving the intended course objectives. Thus, the need and opportunity for more universities to offer courses like YTP is timely. Following former YTP students beyond graduation to assess long-term benefits of the offering would be prudent. A multisite research study exploring the long-term personal and professional impact of courses such as these is also warranted.

## Conclusion

Course design is not an easy task, but course design bridging paradigms is nearly impossible. The YTP course implemented in 2004 (with eight students) is a thriving course in today's academy, at one of the largest U.S. universities. Fortuitously, some other universities have similar offerings.<sup>20–29</sup> This curricular innovation definitely advances integrative health through research and education, giving students (our leaders of tomorrow) the experience and evidence base to implement yoga into their lives, careers, and culture. Although tracking is not currently available, based on their undergraduate majors, many of the students who have taken this course over the years have likely become healthcare professionals. Today, those students hopefully use yoga in both their personal and clinical practices. Longitudinal, qualitative research needs to be conducted to validate the effect of YTP and other similar courses and expand the number of universities that offer such a course. Innovative curricular design is vitally important in advancing cultural change, and YTP has been an important, albeit small, part of that movement.

## Conflict-of-Interest Statement

The authors have no conflicts of interest to report.

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