



## Tourism education on and beyond the horizon

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### A B S T R A C T

In the context of the changing economic, social, and technological environments, this paper projects the need for radical transformations of tourism education, including curriculum, program offering, pedagogy, and learning environment. Entrepreneurship, innovation, crisis management, data analytics, humanities, and communication are essential elements of broad-based tourism curricula. Cross-national, online, and “fluid” degrees will flourish and be widely embraced. The increased adoption of blended learning and flipped classrooms, knowledge co-creation learning arrangements, and robot teaching assistants will change the job nature of educators. The integration of formal and informal learning spaces, with the use of augmented and virtual reality tools, will further challenge educators’ roles and their use of pedagogies.

News headlines and consulting firms have declared that alarming percentages of jobs today will become obsolete, automated, or replaced by robots. Many of the at-risk jobs include a high proportion of repetitive, low-skill tasks (Mahdawi, 2017). Unfortunately, the tourism industry has a reputation for employing low-skilled workers who engage in menial work (Baum, 2007). For instance, a large part of a hotel laundry department, room service deliveries and luggage handling, as well as cooks and cashiers could be replaced by robots or other equipment. Technology-assisted self-service will also expand further, and human tour guides at attractions will be replaced with QR codes and personal mobile devices. Hotel front office and service center staff will be partially replaced by mobile apps to process check-ins/outs, service orders, and information requests. Besides repetitive tasks, artificial intelligence (AI)-based machines will be able to perform functions that require higher cognitive capabilities. More personalized services, such as generating social media postings, providing online customer services, and suggesting relevant service offerings, could be effectively performed by non-humans. However, tourism jobs are not actually disappearing, they are just being redefined. New roles requiring new skill sets are being invented or are emerging organically. While these trends may have greater implications for vocational education or skill training, higher education will be affected as well.

For the most part, the current tourism education is traditional. Curricula, program offerings, pedagogies, and learning environments have been updated and refined over the years; however, revolutionary changes have not happened in a world full of innovations and disruptions. Radical transformations and breakthroughs are required—changes that may be uncomfortable for many but are essential for the sustainability of tourism education.

### 1. Curriculum

Tourism degree graduates will need higher-level soft skills, such as critical thinking, problem solving, and lifelong learning. Although these skills have been discussed and included as graduate attributes of various programs, the current dynamic socioeconomic, technological, natural, and political environments and the constantly evolving context make these competencies important for all levels of tourism professionals, rather than becoming important only as graduates move up the career ladder.

Considering the fact that many people change their profession to a field that is not relevant to their college major, an inter- or multi-disciplinary curriculum will be more beneficial to students preparing for immediate employment and the life-long pursuit of their professional and personal goals. Many of the subjects and concepts delivered by tourism programs are actually applicable in other professions. Through an inter- or multi-disciplinary approach, tourism graduates will develop ethical and humanistic thinking that can set them apart from AI-based machines.

Graduates equipped with conventional management competencies, such as marketing, finance, and human capital, are no longer sufficiently prepared for their future. Entrepreneurship and innovation should also be embedded in their learning. The curriculum and extra-curricular activities should be designed to nurture the students’ entrepreneurial and innovative spirit and level of excitement.

Owing to technological advancement, competencies in data analytics are required for students to comprehend the meaning of big data. For the same reason, professional ethics are even more important now and in the future to protect the integrity of all stakeholders. Humanities

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should be incorporated in the curriculum to provide graduates with a solid philosophical foundation, including knowledge in ethics, law, history, and arts, from an analytical perspective. Such competencies will allow future professionals to examine the theoretical frameworks of ethical systems and understand their relationship with legal systems and contested moral issues.

Although the mastery of a foreign language will no longer be required from a technical perspective because machines can conduct instantaneous translation via wearable devices, language and communication skills, including machine language and communication, will be even more crucial in the future. With a gradual transition away from the dominance of developed countries in the global tourism economy in favor of emerging economies, understanding diverse cultures, in which language is fundamental, will provide advantages to tourism professionals. Human contacts with emotions and behaviors based on solid cognitive and affective competencies will still be preferred by tourists compared to machine-based interactions.

Crisis/disaster management likewise deserves special attention in the curriculum, as these events happen more often and at a larger scale than ever before. Most programs now include this topic as part of a course, but such arrangements barely equip graduates with the ability to deal with these inevitable events.

In the past two decades, tourism degrees have become more specialized, with curricula tailored to areas such as spa management, casino management, and golf management. In the future, more broad-based programs will emerge to cultivate a versatile set of cognitive abilities. For example, a Tourism Data Science program will allow students to develop skills necessary to analyze and interpret big data, as well as learn the design tools and methodologies to obtain such data. A Tourism Design program will enable students to develop scientific, culturally sensitive, and holistic approaches along with ethical frameworks and legal policies to address challenges faced by various stages of economic development and shape and support sustainable tourism development.

## 2. Program offering

Many programs are already offered in 2 + 2 (for a 4-year undergraduate program), 4 + 1 (for undergraduate and master programs), or other modes of collaboration. For example, the European Master in Tourism Management is designed for students to spend three semesters in three countries (i.e., Denmark, Slovenia, and Spain) before completing their thesis during the fourth semester in any of the three countries or other partner universities in other countries. Similarly, The Hong Kong Polytechnic University (PolyU), University of Houston, and École Hôtelière de Lausanne jointly offer the Master of Science in Global Hospitality Business degree, in which students spend three semesters in three continents plus a final project semester. Upon completion, students receive a degree from their home institution and a certification of completion from the other two partners. Cross-national collaborations will continue to grow in the future.

A number of tourism Massive Open Online Course (MOOC) modules are already available. Some programs recognize the completion of MOOC modules and count such credits as part of a student's graduation requirements. For example, credits earned from the online MicroMasters program offered by the School of Hotel and Tourism Management at PolyU can be counted as part of their Master of Science in International Hospitality Management program (MicroMasters, 2017), if the learners decided to enroll in the on-campus program afterwards. Other hospitality and tourism programs are considering incorporating these online courses into their curriculum. Moreover, a blended mode of learning will become commonplace in the near future.

A “sharing economy” model creates a win–win–win situation for the learners, course-offering institution, and credit-accepting institution. Learners will have access to expertise outside of their university and geographic location. The online mode also caters to the “on-demand”

visual-rich needs of learners. Offering institutions will gain a reputation and impact from the courses and, subsequently, attract high-caliber students for further study, while accepting institutions will benefit by reducing their teaching load and broadening their curriculum scope.

The “fluid degree,” partly facilitated by cross-national collaboration and online course offering, can be obtained by credit accumulation from different disciplines and/or institutions across national boundaries, both online and offline. This degree format would personalize student learning based on their interests and career/life goals. As multi- and inter-disciplinary as tourism, it is a prime candidate for such a fluid arrangement.

While having online degrees is not new, a new model of implementation is emerging. Traditional online education was initially designed to fit the needs of adult learners who could not physically attend classes on campus. The new model caters to learners who wish to gain exposure to diverse cultures. The Minerva School at KGI (Minerva Schools at KGI, 2017) offers four-year degree programs, albeit non-tourism related, where students spend four years in seven cities around the world and take all subjects online. The co-curriculum includes location-based experiential activities for students to be exposed, engage, immerse, and make an impact. This mode of learning is particularly fitting for tourism studies where cultural understanding is a prerequisite to future success.

## 3. Pedagogy

Changes in pedagogies are accelerated by influences and demands from various stakeholders. Today's (and tomorrow's) learners have different behaviors and expectations compared with past students. Learners today are more diverse in demographics, cultural backgrounds, and learning preferences. The availability of instant need fulfillment fueled by modern devices and constant information exchange increases their expectation of learning on demand, and their appetite for “edutainment” can no longer be satisfied by conventional lectures. The need for relevance and meaning motivates the participation of today's learners in co-creation opportunities (Irani, 2015).

In addition to offering degrees in an online and offline mixed mode, blended learning within a course has already gained recognition and is being promoted by numerous institutions across disciplines. The basic factual information or foundation can be made available online for students' self-learning. The lower levels of Bloom's taxonomy, including knowledge and comprehension, and to a certain extent, application, can be achieved through online learning prior to offline classroom interactions. The production costs and complexity of offering online content with multimedia and virtual/augmented reality have been significantly reduced. The time-consuming nature of online interaction with a large number of learners can be supported by AI-based or robot teaching assistants (TAs).

Given that the blended mode allows for higher cognitive-level instructor–learner interaction during “face-to-face” (physical or virtual) sessions, flipped classrooms are being adopted in a faster rate. This change means that lecturers are no longer the “sage on stage” but rather are required to be facilitators of learning. Lecturers are no longer the sole source of knowledge; they are now co-creators of knowledge alongside students. The successful implementation of flipped classrooms requires the active participation of both lecturers and students. With millennial learners being labeled as tech-savvy, short-attention-span individuals who prefer interactive, experiential, and collaborative learning (Sanchez, 2016), the use of new pedagogies can be easily embraced. However, educators will need to learn “new tricks” and change the way they teach, refining a new approach that cannot be based on how they learned from the previous generation.

The use of blended learning and flipped classrooms has already been implemented in many institutions and adopted by some pioneering educators. However, similar to any organizational change, adoption is slow and requires specific benchmarks, skills, incentives, resources, and

action plans. Without these preparations, adoption will be slow, confusing, and frustrating for both lecturers and students, and implementation will be limited to a small number of faculty “champions”.

Institutions could have additional financial incentives to move toward online learning. With the reduction in education funding, online course offerings could expand the tuition revenue pool, reduce physical classroom requirements, and decrease teaching hours of the academic staff or human TAs. For universities currently offering distributed learning in multiple campuses, more online learning could reduce non-productive faculty time (e.g., traveling) and enhance student learning experiences. For example, instead of learning via webcasts as distanced participants, all students would have the equal opportunity to learn at their own pace via carefully designed online materials. Furthermore, all students would have equal access to the academic staff regardless of location and receive personalized assistance from online TAs.

#### 4. Learning environment

Traditional classrooms are no longer effective for the new generation of students, who thrive more in informal and stimulating environments that facilitate social collaborative learning. The availability of more flexible and engaging environments, for both formal and informal learning, will be on the rise. University campuses have been engaging in “reimagining” exercises to solicit user views on future learning environment design, and traditional “classroom style” seating arrangement will be a thing of the past. Future classrooms will have movable furniture, transparent and reconfigurable walls, expansive writing spaces (such as walls, floors, and table tops), bright colors, versatile technologies, and de-fronting designs (School Retool, 2017). These modifications will continue to blur the distinction between formal and informal learning spaces.

The concept of “hives”—an activity hub swarming with activities and filled with busy learners—will take the space of some traditional classrooms. Spaces in the hives could be used for formal classes or informal social learning outside of scheduled class time. Such an environment encourages seamless, personalized, and self-organized learning. To a certain extent, traditional laboratories, such as computer labs, travel agency labs, housekeeping labs, and food and beverage labs, will become obsolete. In addition, skill training components will no longer be required because of the displacement of these skills by robots or the provision of skill training through virtual and augmented reality tools, which can also facilitate advanced problem solving and critical thinking skills, for example in the context of crisis management.

The availability of makerspace, or a collaborative workspace, could serve as an incubator for innovation and entrepreneurship, because it gives students the opportunity to explore their interests, learn to use physical and virtual tools and materials, and develop creative projects, which move them away from knowledge consumption to creation. From a broader perspective, makerspace is more than a space but rather a mindset that should be nurtured (Makerspace for Education, 2017). The makerspace has been quickly adopted by engineering students and has the potential to benefit hospitality and tourism students as part of their curricular, co-curricular, or extra-curricular activities. Such an experiential learning space could be an alternative to the food and beverage or lodging labs, where activities are monitored by lecturers. In makerspaces, students can try out their ideas, construct prototypes, practice project management and research skills, and sharpen their suite of soft skills, such as decision making, problem solving, leadership, and communication.

Informal learning spaces, including hives and makerspaces, provide

a platform for community learning, encourage cross-disciplinary collaboration and innovation, and empower the learners. However, although the idea makes sense, higher education institutions need to tear down the disciplinary silos that exist in many campuses. The traditional categorization of learning spaces versus gathering/social spaces needs to be re-examined, as much of the effective learning happens during social gatherings (online and offline).

With the sharing of courses among institutions, the inclusion of more humanities components, the co-creation of students' learning experiences, and the support from robot TAs and the technical team behind making online learning a prevalent phenomenon, tourism scholars will spend fewer hours interacting with students and more hours on research and discovery. For better or worse, this shift would change the job nature of faculty members.

#### 5. Disclaimer

If history has taught us anything, it is that all those “know-it-alls” who think they got it all figured out actually didn't. In this disruptive, paradigm-shifting, exciting time, predicting the future is an impossible task. Ten years from now, if anyone is curious enough to read this opinion piece, that inquisitive soul may remark that she thought she knew, but then again....

One thing I do know is that the scenarios now considered to be little more than a pipe dream will be within reach in the not-so-distant future, just beyond the horizon. The sun will rise for sure!

#### References

- Baum, T. (2007). Human resources in tourism still waiting for change. *Tourism management* Pergamon <http://dx.doi.org/10.1016/J.TOURMAN.2007.04.005>.
- Irani, Z. (2015). Are business lecturers now part of the “edutainment” business? Chartered Association of Business Schools. Retrieved October 12, 2017, from <https://charteredabs.org/business-lecturers-now-part-edutainment-business/>.
- Mahdawi, A. (2017). What jobs will still be around in 20 years? *Read this to prepare your future | US news | The Guardian*. Retrieved October 12, 2017, from <https://www.theguardian.com/us-news/2017/jun/26/jobs-future-automation-robots-skills-creative-health>.
- Makerspace for Education (2017). Makerspace - Makerspace for education. Retrieved October 12, 2017, from <http://www.makerspaceforeducation.com/makerspace.html>.
- MicroMasters (2017). International hospitality management | edX. Retrieved October 12, 2017, from <https://www.edx.org/micromasters/hkpolyux-international-hospitality-management#courses>.
- Minerva Schools at KGI (2017). Minerva schools at KGI. Retrieved October 12, 2017, from <https://www.minerva.kgi.edu/>.
- Sanchez, S. (2016). The millennial learners | University of Venus. Retrieved October 12, 2017, from <https://www.insidehighered.com/blogs/university-venus/millennial-learners>.
- School Retool (2017). Defront the classroom, set up for student-centered learning. Retrieved October 12, 2017, from <http://www.schoolretool.org/big-idea/defront-the-classroom>.



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