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## **Implications of the Sharing Economy for Online and Blended Education**

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### **Abstract**

The sharing economy phenomenon is disrupting traditional organizations. Sharing concepts coupled with e-Learning can and likely will disrupt higher education. We explore the sharing phenomenon and compare and contrast it with online and blended education. We conclude more effective use of sharing technologies and better course content, innovative instructional technology, and good teaching can help accredited institutions of higher education provide better learning environments as well as stronger degree programs and certifications.

**Key words:** Sharing economy, collaborative economy, online and blended education

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## **1. Introduction**

Information Technology has enabled a sharing economy that has impacted and disrupted how people commute, take vacations, and receive many other services. Online and blended education are services that may be disrupted and so it is important to examine these and other education services, especially for higher education, through the lens of the sharing economy. In this viewpoint article, we first review the sharing economy concept, then compare and contrast it with online and blended education. Similarities and differences between the two phenomena are highlighted. We use characteristics of the sharing economy to provide some suggestions to improve online and blended education.

We are still at the early stages of a significant phenomenon commonly known as the sharing economy. Other terms such as “collaborative economy,” “peer-production economy,” and “peer-to-peer economy” (Botsman & Rogers, 2010) have been used to refer to the same concept. Indeed, the term “collaborative consumption” was first coined by Felson and Spaeth (1978) long before the Internet. However, Internet-based applications have significantly contributed to the growth of the sharing economy. May and Horney (2014) point out: “it is universally acknowledged that the Internet is almost unparalleled as an engine of economic growth” (p.1).

In addition to ride sharing services such as Uber, Lyft, and Sidecar; and space sharing services such as Airbnb and HomeAway, there are currently other services available that fall under the broad umbrella of the sharing economy. These services include: Citi Bike, which provides tourists and natives in some cities bike sharing to move around; DriveNow, a car sharing service available in many cities in Europe; Turo, Zipcar, and Car2Go, car sharing services available in the US and Canada; Wonolo, an on-demand staffing service; TaskRabbit that provides home cleaning and minor repair services; Store at My House that offers storage services; Amazon’s Mechanical Turk service that finds people who are willing to do relatively simple tasks for a small fee; Fon that allows people to share their WiFi; LiquidSpace that allows individuals and organizations to find on-demand space, and EatWith which is an application for people who want to open their homes as a restaurant for a meal now and then. There are similarities between these applications and online and blended learning which we will describe in the next section.

The sharing economy is new, but its growth and valuation has been very significant. For example, Airbnb was launched less than a decade ago - in 2008. As of December 2016, the home sharing business is valued at \$30 billion; this is more than Hilton Worldwide Holdings. Uber Technologies is valued even higher at \$68 billion (Tan, 2016). Even with these examples of success, a commonly accepted definition of the sharing economy does not exist. Instead of a definition, Botsman (2013) suggests we describe the sharing economy broadly as a distributed network to exchange or share underutilized resources and assets.

Other researchers have tried to describe the sharing economy from the point of its value creation. For example, Rothschild (2014) suggests that using other peoples’ automobiles, rooms, tools, etc., allow underutilized resources to be more productive. Koopman, Mitchell, and Thierer (2015) propose that bringing various buyers and sellers together makes both demand and supply more competitive. Cowen (2009) notes that the sharing economy has created a better balance of power between buyers and sellers.

## **2. Opportunities and Challenges of the Sharing Economy**

In a recent survey of U.S. adults who are familiar with the sharing economy (PWC, 2015), 86% of the respondents agree that the concept of a sharing economy application “makes life more affordable,” 83% agree that it “makes life more convenient and efficient,” and 76% agree that “it’s better for the environment” (p. 9). About 78% of the respondents “agree that the sharing economy reduces waste” (p. 21). Other opportunities include “flexibility” and the fact that it is “a way to earn money” (p. 20). On the other hand, 72% feel that “the experience is not consistent” and 69% state that “they will not trust sharing economy companies until they are recommended by someone they trust” (p. 9). Fortunately, with the availability of “product rating” (Koopman et. al, 2015) the lack of trust issue, to some extent, can be reduced or resolved. As May and Horney (2014) stated: “technology is enabling trust between strangers” (p. 7).

In the U.S., as well as globally, regulatory agencies are creating some challenges for sharing economy types of services. For example, in some cities sharing ride services or short term renting of space in private residences are

forbidden by regulatory agencies. Other challenges include the lack of full services like 24 hour service at a hotel versus a rental space from Airbnb (Lehrer & Moylan, 2014) or in a more general term, quality of the overall service.

Implications of the sharing economy for the labor force is a more serious challenge and potential problem. If a much larger percentage of services are performed by a temporary and part-time labor force, or if a much larger number of tools are shared instead of each individual household owning one – what will be the effect on production and the labor that goes into that production? Similarly, in the case of online and blended education, if indeed a smaller number of courses and degree programs are developed by a very highly qualified faculty and thousands of individuals enroll in the same course, as some have advocated, what is the quality of the overall learning experience? What are the implications for faculty? As we describe below, there are ways to use some concepts of the sharing economy while maintaining and even improving the overall quality of teaching and learning.

### **3. Online and Blended Education**

We have seen the disruptive nature of information technology and information systems in areas such as general commerce, marketing, retail, music distribution, publishing, news media, culture, politics, community organizing, philanthropy, as well as education. The question we need to ask ourselves is not how, when, and the extent to which technology will disrupt higher education. Rather, we must ask: what are the best approaches to take advantage of educational technology to improve learning and provide education more effectively all over the world? The networking and peer-to-peer concepts of the sharing economy are useful models to learn from and perhaps utilize.

Technology has changed at least two things about higher education (Humphreys, 2012). First, students today think differently about learning than prior generations and second, educators currently work differently due to the availability and accessibility of various types of educational technologies. A recent survey (Dahlstrom, Brooks, Grajek, & Reeves, 2015) indicates that about 49% of all undergraduate students took at least one fully online course in 2014. Further, about 81% of the undergraduate students indicated that some of their courses were taught partially online and partially face-to-face (blended course delivery). Fully online or blended development and delivery of courses are generally referred to as e-learning in the literature. Grajek (2016) defines e-learning as a learning method “that involves a web-based component, enabling collaboration and access to content that extends beyond the classroom” (p. 3).

Using educational technologies in higher education should not occur simply because they are available. Rather, we need to focus on ways to use technology to facilitate and improve learning and to help students succeed. We also need to find ways to more effectively develop and deliver learning content and materials. We suggest this can be done by using the sharing economy concept of collaboration among content providers and among consumers of the content.

### **4. Comparing the Sharing Economy to Online and Blended Education**

Growth of sharing economy applications and e-learning have been significant. Major drivers encouraging sharing economy applications are making more productive use of underutilized resources and assets, increasing flexibility, reducing waste, creating a better balance between the supply and demand for various services, saving the environment, lowering the cost of services to make them more affordable, making services more convenient, and generating part-time employment revenue.

E-learning provides many of the above benefits. Significant amounts of open source content are available to enhance the quality and quantity of educational resources. These new resources can be incorporated in e-learning as well as face-to-face instruction. E-learning allows students and faculty to learn and teach any time, from anywhere, using many different platforms. It is well known that the demand for certain courses and degree programs is decreasing while for others demand is increasing. As a result, a clear imbalance exists between supply and demand. More students could be served in the under enrolled courses. Many state governments are reducing financial support for higher education and the costs of providing high quality education are increasing. We suggest that it is time to seriously consider facilitating ways to better utilize the available “seats” in fully online and even blended courses if geographic distance permits. This change can begin with sharing courses and programs by higher education institutions within the same state higher education system and then expanding further. The need for high quality and widely available

higher education is great and of paramount importance. It is we in higher education who need to more intelligently use our available resources to develop and deliver what is expected for a 21<sup>st</sup> century higher education.

Overall cost per credit hour decreases as the number of individuals enrolled in a class increases and quality most likely will not suffer if an appropriate enrollment cap is placed on each online or blended course. Sharing will help make the course costs lower and more affordable. We are not advocating high enrollment in online or blended courses to bring the costs down. We strongly believe in offering high quality online and blended courses with a significant amount of faculty input, guidance, and interaction with students, and interactions among students, as well as interactions with those creating the course contents, and a sufficient level of technical, library, and career services support. We also believe that if courses are shared among various institutions, it is more likely that they will be offered on a more regular frequency that makes it more convenient for potential students to take the required courses and graduate in a timely fashion.

Some have argued that sharing economy applications, such as space sharing in private residences, are not providing full-service types of support identical to that of a hotel room. Similarly, an online or blended course may not offer the same learning potential and outcome as a face-to-face course. We do not suggest that e-learning is suitable for all students, all subjects, and all faculty. Rather for technology savvy individuals who have the required time management and self-discipline skills, taking high quality e-learning courses can result in learning outcome at least as good as face-to-face instruction (Neuhauser, 2002; Kassop, 2003; Herman and Banister, 2007; Dell, Low, and Wilker, 2010; Ni, 2013; Szeto, 2013).

In some parts of the world, regulatory agencies are restricting or totally preventing the use of sharing economy applications, partially due to the mundane and antiquated regulations, concerns about quality of services, and the potential impact on the labor force. With the availability of products and services rating platforms and the more competitive nature of many markets, the validity of some of these concerns are questionable. Similarly, some governing boards are wary of accepting e-learning credits if the courses are developed and delivered by other institutions than their own. However, with the availability of external program evaluation, accreditation and quality rankings as well as other evaluation platforms, the quality of courses and programs is easier to assess.

## **5. Summary, Conclusion, and Recommendations**

Sharing economy applications and e-learning are here to stay and will likely grow in terms of reach and range of services. Websites like CourseHero.com, TeachersPayTeachers.com, Udemy.com, and Khanacademy.org foreshadow the sharing in education. Those Universities and educators who adopt sharing applications and participate in their development will most likely benefit the most. Forward-looking individuals, institutions, cities, and regions need to envision their environment from the existing networked global village point of view and plan their future education infrastructure development accordingly. The majority, if not all, of our successes come from individuals who use their entrepreneurial spirit to develop new applications, products and services, and find ways to better serve needs of communities. We need to take these realities into consideration when we think about and consider phenomena such as sharing economy applications and e-learning types of education.

Sharing economy models are successfully using analytic tools to measure effectiveness of their business models. Similarly, we need to use “emerging technologies” (Grajek, 2016, p. 11) such as course and learning analytics to evaluate effective teaching and learning. We need to use “predictive analytics” (Baer & Campbell, 2012) to better understand students’ learning habits so that we can design more effective instructional and learning content. Some course management systems have already implemented this kind of capability in their platforms. These steps will help to identify at risk students to improve learning outcomes and hence to increase their success. It will also improve the performance and accountability of higher education institutions.

Along with the use of technology to improve learning, in general, and e-learning, in particular; we need new paradigms in curriculum design, instruction, and course staffing. For example, in MIS programs close collaboration between Systems Analysis and Design and Project Management course content and delivery, integrated group projects, and team teaching can enhance not only learning but the quality of these courses. The same claim can be made for other disciplines. For example, collaboration between faculty in Marketing and Psychology and between faculty teaching Systems Analysis and Design and Marketing courses. These cross-discipline collaborations are more feasible in e-learning than with the face-to-face mode of course delivery.

These significant and transformative goals can be achieved by team work and collaborations among departments, colleges, and institutions; increasing and improving interactions with the learners; facilitating interactions of learners with the courses and curricula contents; and with better use of educational tools and technologies. These sharing goals can also be achieved by developing group projects and learning activities among learners as well as facilitating more interactions for learners with various types of digital educational materials including interactive learning games, case studies, and simulations that can now be more easily created and distributed.

Transforming global higher education is a shared responsibility of faculty and administrators. Also, to create 21<sup>st</sup> century models for higher education, we believe that various partnerships are essential. These partnerships should go beyond departments, colleges, and institutions. We suggest a consortium of state or region-wide institutions of higher education. Also, more partnerships with alumni, and various for-profit, not-for-profit, governmental, non-governmental, and other types of organizations to collaborate on course and degree program content and delivery. We can create better, more robust higher education systems that meet the universal need for education throughout our lives.

## **Overview of the contents of this issue**

This issue of the journal includes an invited article, two traditional research articles, and a research note.

J. George looks at the discipline and recent historical MIS job openings and enrollment as well as recent publication areas in top MIS journals and identifies several research topics that are important currently and in the near future. He concludes by predicting a bright future for the MIS discipline.

de Vreede, Boughzala, de Vreede, and Reiter-Palman propose a team creativity model and suggest that both individual creativity and shared mental models contribute to team creativity. They conclude that shared mental models act as moderators between knowledge sharing and team creativity.

Klein presents a framework for understanding information quality of online reputation systems. She applies the framework to analyze eBay's Feedback forum and Rate My Professors online reputation systems.

Finally, Miller and Melton in their research note explore and present a typology of student social media users based upon their posting behavior. They suggest the typology is an initial step for the development of measures and interventions to help students manage their online images by examining their posting behavior.

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