

The Pivot to Online Education in the Bahamas: Responding to Hurricane Dorian and the Global Pandemic

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ABSTRACT

Individuals, organizations, and countries have had to address the unprecedented and dramatic impacts of the global COVID-19 pandemic from a health, economic, education and societal perspective. An added challenge in the Bahamas is related to Hurricane Dorian. Hurricane Dorian struck the northern Bahamas in the fall of 2019 devastating the Abaco Islands and Grand Bahama.

This paper assesses the efforts of within the Bahamas to recover from the dual impacts of the pandemic and the hurricane. In particular, the paper addresses the importance of developing the workforce-ready skills required to meet the needs of businesses.

Specifically, the paper utilizes the Bahamas Technical and Vocational Institute to provide examples of developing and delivering key, in demand, workforce skills in traditional on-campus formats and increasingly using online and blended modalities in response to Hurricane Dorian and the global pandemic.

Introduction

Across the globe, society has struggled to address the wide range of impacts that have developed from the COVID-19 pandemic. The impacts of the pandemic have been evident in the educational, societal, economic, and political realms. Specific impacts have included higher levels of unemployment, reductions in the Gross Domestic Product of countries, significant increases in the workloads within the healthcare system, reductions in tourism and requirements to rethink the delivery of education. As an example, the delivery of education has changed from the traditional paradigm of face to face to either fully online or in some cases blended formats. The global COVID-19 pandemic has dramatically changed education and the delivery of education from classroom and face-to-face instruction; to home and on-line classes and training—a revolution in how we will learn and train forever (World Economic Forum, 2020). Indeed, the World Economic Forum (2020) notes that “while countries are at different points in their COVID-19 infection rates, worldwide there are currently more than 1.2 billion children in 186 countries affected by school closures due to the pandemic (World Economic Forum, 2020).

Research (United Nations, 2021) suggests that the impacts of the pandemic will be evident for some time and create a period of higher unemployment that will be sustained. Indeed, the global skills gap evident prior to the COVID-19 pandemic is anticipated to be of even more significance post COVID-19. It is anticipated that there will be an increased need for a more highly skilled workforce (EdSurge, 2021). In addition, the International Labour Organization states that “the world of work is being profoundly affected by the global virus pandemic. In addition to the threat to public health, the economic and social disruption threatens the long-term livelihoods and well-being of millions (ILO, 2020).”

As noted, another important COVID-19 impact is linked to education. For example, the Organization for Economic Cooperation & Development (OECD) states that the pandemic has forced the closure of

schools 188 countries. These closures have negatively impacted the learning processes of more than 1.7 billion children of all ages. Of course, families with school age children have also had to deal with the impacts of school closures and the resultant requirement to learn at home.

Further, the World Economic Forum (2020) highlights that i) the COVID-19 pandemic has resulted in many school closures throughout the world. In total, more than 1.5 billion children were restricted from accessing their physical classrooms; 2) to meet emerging public health guidelines many education systems changed dramatically to, in particular, move to virtual or using technology to deliver courses remotely using a variety of digital platforms; 3) although there have been concerns raised related to the quality of online education, research suggests virtual or on-line learning can actually increase the retention of education material and information in less time than traditional modes of delivery meaning the changes coronavirus have caused might be here to stay (World Economic Forum, 2020).

Unfortunately, the pivot moving education to online modalities to address the pandemic has had serious issues. For example, there are often questions about basic issues such as the equality of access to the required tools and infrastructure. For example, many students may lack basic tools such as computers, Internet, and printers. Indeed, in a pre-pandemic survey, shortly before the pandemic outbreak a survey noted that “6 in 10 on-line learning administrators say their campuses require professors to train more before teaching on-line – and 70% say students are not formally prepared to study virtually creating concerns about learning quality (McKenzie, L. (2020).”

A CHLOE survey suggests that many students are simply not ready for online education. The survey states that “ ... 70% of respondents noted that students looking to study on-line do not have to take any orientation related to that mode of study (Legon, & Garrett, 2020).

In addition, Legon and Garrett (2020) note that “given the known difficulties of students adjusting to on-line study and the higher drop-out rates, we considered the figures for required on-line student orientation are surprisingly low.” In fact, this survey suggests that the majority of respondents basically moved traditional in class material to the online format and that there was very little or, in fact, no support for developing online courses and content. In that regard, the survey states that “...the brand of virtual education most of them (students) are seeing right now isn't the sort of high-quality on-line education that is possible when it is designed thoughtfully with help from professionals and well-trained professors” (Legon and Garrett, 2020).

Overall, Legon and Garrett (2020) note that the survey data “collectively show that most institutions are not prepared to flip a switch and move all their learning into truly online settings” according to Legon. Indeed, crises, like the COVID-19 pandemic, often can afford challenges and opportunities for innovation and new opportunities or the education sector”.

In the Bahamas, the country has faced a compounding issue in addition to the COVID-19 impacts. Specifically, the Government of the Bahamas must address the significant impacts of Hurricane Dorian. Hurricane Dorian (1-3 September 2019) is estimated to have reduced the GDP of the country by 25% or \$ 3.4 billion (USD). (Inter-American Development Bank, 2019). By way of comparison these damages in the United States would equate to a loss of the economic output of Texas, Florida and California

combined (Inter-American Development Bank, 2019). Indeed, the housing sector alone impacted an estimated 3,000 homes including more than \$ 1.48 billion USD in damages.

One impact of the hurricane has been to focus attention on the skills required to reconstruct the damage and this event has increased the urgency to address the technical trades skills gap. As one method to address the skills gap, there was interest in moving from the traditional education model that was primarily face-to face and that included some on-the-job opportunities to a more accelerated system that was delivered in a blended format using industry recognized certificates. It is evident that the dual impacts of Hurricane Dorian and the pandemic represent unprecedented challenges to the political, social and economic systems within the Bahamas. In response to the impacts of these unprecedented challenges the Government of the Bahamas identified the need to diversify the economy and develop a more digital presence nation-wide. In that regard, the Bahamas mirrors international trends.

“On-line and blended education are here to stay. There will now be more use of, and appreciation of, simulations and technical options ... in the use of technology to deliver content ... lectures ... assignments and quizzes, whether synchronous or asynchronous. ...the workforce has also shifted towards on-line platforms. There is now a reliance on short, specific, job-ready, professionally certified courses and training. Technology skills and competencies are the new job security during the post-COVID-19” (Legon and Garrett, 2020).

The Bahamas Technical and Vocational Institute

The Bahamas Technical and Vocational Institute (BTVI) is the premier tertiary technical institution in the Bahamas. It offers certificate, diploma and associate career and workforce training to approximately 6,000 students annually. The key areas of enrollment include areas of enrollment such as information technology (IT), office and business, cosmetology, and trades. In addition to the traditional programs BTVI also develops custom training delivered to many firms’ country wide. Recently, BTVI has been engaged in providing specific focused responses to the urgent national priorities driven by Hurricane Dorian and the pandemic. These national priorities included the trades to assist with reconstruction efforts and IT to assist with economic diversification efforts. To meet the critical and urgent national priorities the Government made scholarships available to BTVI students. Specifically, these scholarships were designed to provide training to address the growing work force concerns related to Hurricane Dorian and the COVID-19 pandemic. The BTVI scholarships are designed to support approximately 3,000 students annually. As noted, an issue to be addressed by the scholarships was related to the national skills gap. In that regard, a recent survey suggested that more than 65% of respondents noted the fact that employee quality nationwide is simply not satisfactory.

Also, BTVI has moved to adopt industry recognized certifications such as those available from Cisco, City and Guilds and CompTIA. Currently, BTVI is a Cisco Academy as well as a City & Guilds centre. In addition CompTIA has awarded BTVI an award of excellence annually for leadership in IT within the Latin America and Caribbean region. Currently, BTVI is pursuing recognition as a National Center for Construction Education and Research (NCCER) authorized centre. This designation provides BTVI with the opportunity to offer US certified, globally recognized, courses in the trades. NCCER courses are currently available through a partnership with Valencia College until the certification process is complete which is expected

in fall 2022. At this time, BTVI has trained more than 100 trainers who have provided training to approximately 1,000 students in the core and more than 100 students in Level One and Two of the Five step program leading to designation as a master crafts person.

Like academic institutions globally, BTVI responded to the COVID-19 pandemic by completing a number of key changes in operational models related primarily to online course delivery.

Prior to the pandemic, BTVI had increasingly advanced online education options. The intention was to gradually develop internal capacity that would allow an expansion of on-line education to cover the whole country.

As a part of that initiative, faculty members were trained facilitated by Commonwealth of Learning instructors. Specifically, the training was related to developing and teaching quality online courses. There is more to do in this area, but BTVI has made tremendous steps in expanding the use of on-line education. At the start of the pandemic (March 2020) BTVI was offering approximately 40 IT courses in a blended format which afforded a template for moving other courses to the online platform (Moodle).

In terms of the infrastructure, BTVI had gradually improved the systems including adding smart classrooms and computer labs. Improvements in these areas made a formal transition to online more seamless and effective. As budgets dictate additional improvements are being completed incrementally.

The transition globally to online education was substantially accelerated in response to the COVID-19 pandemic. In the case of BTVI, the response included moving more than 450 active classes that were in progress during 2020 Spring term. The courses were modified in some instances to include case-studies, simulations, discussion boards, videos and classes that were available live (and recorded) via zoom. One identified challenge related to some trade related classes. The trades are often more difficult to accommodate online. In terms of trade related courses these included a more blended format with the theory online and the practical sessions face to face. These practical face to face sessions were called “boot camps” and they were held with a limitation on the numbers in attendance and following health protocols.

As BTVI is a certified Cisco Academy and as a CompTIA recognized IT centre of leadership excellence in Latin America and the Caribbean the move to online was relatively easy to manage. To add emphasis to the online imperative BTVI created a Centre for Online and Distance Education (CODE) which was established in the Spring of 2020 to coordinate online initiatives such as faculty and staff training.

In general, it appears that many efforts to manage the transition to online were fraught with problems. Indeed, (Legon, 2020) notes that “the brand of virtual instruction that most professors and students are doing on the fly right now could damage perceptions of on-line education”. Indeed, the authors state that for those students (and faculty) with limited exposure to online education the global pandemic will simply confirm the existing stereotypes related to the poor quality of online learning.

In contrast, BTVI adopted a more systematic approach that included:

- i) Extensive Online Training for Faculty Members

Of course the success of any academic program relies in large measure on the faculty members. Faculty members must be trained in developing and delivering materials using the online platform. In that regard, BTVI initiated technology and online teaching training for all faculty. Much of this training was

developed in house and included a series of nano courses with digital badges for successful completion of the courses. In addition, the Commonwealth of Learning provided a grant to support training notably in quality assurance with respect to online course delivery. The Commonwealth of Learning (COL) is an “inter-governmental organization created by the Commonwealth Heads of Government to promote the development and sharing of open learning and distance education knowledge, resources and technologies”. Twenty-two BTVI faculty members completed the training and there was a participant from the Ministry of Education. Further, five faculty members were identified to complete additional training supported by the COL to certify them as faculty leads.

One important practical outcome of the COL sponsored training was the creation of a five-course workforce readiness certificate with courses in literacy, numeracy, information technology, entrepreneurship, and student success.

ii) Professional Development Training Online

As the country went on an initial lock-down (March 2020) the faculty and staff at BTVI were actively engaged through a systematic upgrading of their professional credentials. For example, more than 90 employees received their Occupational Safety & Health (OSHA) credentials to assist in creating a safe workplace. Also, ten employees in the Finance and registration areas completed training to upgrade their skills with respect to the Empower system used for financial aid and registration.

In addition, many individuals took a series of short, online professional development courses in areas such as project management, emergency preparedness, cross cultural diversity, management, and leadership. These free courses were identified online, and they provided certificates of completion. Finally, the BTVI Centre for Online and Distance Education (CODE) developed a number of courses that were designed to improve employee digital skills. Many of these courses included industry recognized certifications such as Cisco. Also, these courses used open education resources. These accelerated courses were designed to be taken individually or as a package leading to a nano degree including digital badges.

Overall, faculty and staff completed more than 12,000 hours of professional development training. 16

iii) Accelerated Focused Industry Certified Technical Training Program

BTVI has partnered with Valencia College in Central Florida to offer the National Center for Construction Education and Research (NCCER) program. This accelerated, blended, multi-step program is industry certified in the US and accepted in many countries globally. In particular, this program was adopted to quickly and systematically develop a national, trained workforce that would assist in addressing the skills gap. These modular courses include welding, masonry, carpentry, plumbing, electrical and masonry.

The NCCER mandate is to “share the common goal of developing a safe and productive workforce via a standardized training and credentialing program” (National Center for Construction Education and Research, n.d.). The NCCER program includes both online and face-to face course delivery.

In terms of implementing the NCCER program the first step included a “train the trainer” workshop designed to certify approximately 100 Bahamian to the instructor standards of the NCCER. The next step included training cohorts of students. In particular, the first cohort was recruited from Moore’s Island which had been impacted directly by Hurricane Dorian. The intention is to develop the certified skills in the technical and trade areas that can assist in rebuilding the country.

iv) Student Satisfaction Survey

A key to the pivot to online was related to the support of BTVI students. In that regard, BTVI regularly conducts student surveys. A student satisfaction survey was initiated during the initial pandemic lock down (spring term 2020). Responses were received from more than 200 students with 85% stating that their online experiences were “good”.

As noted, surveys are regularly used to generate data that assists in making fact-based decisions. Key survey results from the spring 2020 included:

1. Most respondents were taking their first online course 70%; and 30% had completed a previous online course(s).
2. In terms of course and program quality 80% of respondents noted that they were “satisfied” with the course and 90% were satisfied with the instruction. Specifically, students noted that courses met the learning objectives, courses were easy to navigate using the Moodle platform and there was a good mix of videos and auditory materials.
3. Most of the students (80 %) took final examinations online.
4. Faculty Engagement satisfaction ranged from 81 to 85%.
5. The most cited specific challenges faced by survey respondents was related to reliable internet and the lack of computer equipment.
6. Overall, the 85% of respondents expressed satisfaction with the pandemic online experience.

To summarize, the survey results provided important data with respect to the post pandemic online experience. Respondents were mostly satisfied with instructors and the instructional methodology was satisfactory. Key concerns related to the quality and availability of the internet and access to computers.

Although the overall the results were generally positive, regular surveys will be used to provide timely data to inform decision making and to develop continuous improvement plans.

For example, to facilitate a seamless transfer to online, an introductory course was developed for students taking their first online course. Also, training for faculty engaged in course development and in teaching online remains a priority.

v) Community Support

BTVI has strategically built community support from key business and community leaders and organizations. For example, the RBC has designated BTVI as the recipient of funds from their national Race for the Kids. The support of the Royal Bank has been important as funds generated by the RBC were specifically designated to provide direct assistance to the hurricane damaged northern Bahamas.

Also, the Disaster Relief Fund of the Rotary Clubs of the Bahamas provide computers for the BTVI labs destroyed by the hurricane.

Another important example is represented by an agreement between Commonwealth of Learning (COL) and BTVI. In this agreement the COL sponsored training to improve online teaching skills for faculty members at BTVI. Finally, BTVI has developed more than twenty articulation agreements with academic institutions in the Caribbean, the US and Canada.

In summary community partnerships are very important in the provision of the training necessary to build the BTVI brand and drive the up skilling of the workforce as demanded in the post pandemic world.

- v) Industry Recognized Certifications—there has been an increased focus on increasing the number students completing courses that include industry and globally recognized certifications. These certifications are designed to enhance employment options for students as foreign direct investment projects are announced to redevelop the country. Also entrepreneurship skills are being promoted.
- vi) Using Accelerated Courses Specifically in the Trades —this new delivery model provides shorter, stackable courses oriented to meet industry demand. The model has the benefits of improving student retention, increasing the rates of graduation and improving the quality of outputs with accepted certifications.
- vii) Dual Enrollment Options—to assist with introducing students to career education there has been an increased emphasis on dual enrollment options for high school students.
- viii) Centre for Distance and Online Education (CODE)— this Centre was formally established to create a focus for online initiatives. The Centre is designed to provide support and delivery with respect to online education.

Summary

In summary, BTVI has found that a clear focus on providing shorter, business certified courses in the trades using a model such as that available through the NCCER system is critically important in the Bahamas in addressing the national skills gap driven by Hurricane Dorian and the global pandemic. To effectively address the national skills gap and rebuild the country will require a concerted, sustained effort by government, industry and community stakeholders.

It is clear that we live in very disruptive times. All sectors are changing to adapt to changing customer demands and the more effective use of technology. The pandemic has accelerated many of the changes that were evident pre-pandemic.

Many commentators suggest that the move to provide expand the use of online education will continue to grow both in quality and deployment by countries globally.

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