Chapter 14
Enhancing Organizational Resiliency:
Lessons Learned – COVID–19 and the National University of Mongolia

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ABSTRACT

In this chapter, the authors describe the lessons learned in responding to the various effects of the COVID-19 event that occurred from January 2020 through January 2021 on the ability of faculty to deliver quality, college-level education coursework to the students of the Department of Public Administration at the National University of Mongolia. The experiences are related in terms of the initial shock to the educational process created by the COVID-19 pandemic and how the department enhanced its organizational resilience in response to the challenges posed by the COVID-19 disturbance. The authors provide a summary of the responses made as well as lessons learned. The lessons learned may be used by other organizations of higher learning to navigate stressful conditions while building resiliency and adaptive capacity.

INTRODUCTION

This chapter describes the COVID-19 related experiences of the Department of Public Administration (DPA) of the National University of Mongolia (NUM) by describing the events and actions taken by the authors, the faculty and a visiting professor of DPA, to implement the national government's directives as well as to respond to the COVID-19 pandemic within Mongolia's leading institution of higher learning. The chapter is written in a style similar to an emergency response After Action Report in order to more clearly describe the challenges, the responses made and, most importantly the lessons learned from the organizations response to the shock presented by the COVID-19 pandemic. The chapter begins with a short introduction to Mongolia followed by overviews of NUM and DPA. The chapter proceeds with a discussion of the significant events and numerous actions taken by DPA's faculty members to implement the national government's rules and regulations while at the same time deliver high-quality educational programs to their students. The COVID-19 event, also illustrates the actions taken by both NUM and DPA to enhance organizational resilience. The chapter concludes with a series of "lessons learned" by the faculty of DPA which comprise the actions taken to enhance organizational resilience and adaptive capacity. For the purposes of this chapter, the term faculty includes DPA's professors, lecturers and administrative personnel.

BACKGROUND

Mongolia

Mongolia is a landlocked country located in East-central Asia and is bordered by Russia and China. Mongolia has a land area of about 1.6 million sq. km. and a population of about 3.3 million. Approximately two-thirds of the country's population lives in the capital city, Ulaanbaatar, about 4% are located in other urban areas and the remaining 30% are found in the rural areas, referred to as the "countryside" (Asian Development Bank, 2018). The geography of Mongolia ranges from desert to semi-desert to grassy steppe, with mountains in the north, west and south-west. Arable land is estimated to constitute only 0.8 percent of the country. The Gobi is located in the southern part of the country. The government system is a republic; the chief of state is the president, and the head of government is the prime minister. Mongolia is the world's most sparsely populated country. Mongolia has had steady economic growth in recent years. Livestock raising by nomadic herders remains a major economic activity along with mining; particularly coal, copper, gold and fluorspar (United Nations Development Programme, 2020).

The National University of Mongolia, (abbreviated *NUM* or *MUIS*) is Mongolia's premier university with its primary campus location in Mongolia's capital city, Ulaanbaatar. NUM was established as a public institution of higher education in 1942, and is the oldest university in Mongolia. NUM is also the largest university in Mongolia with an annual average student population of 20,400. The university hosts five main faculties in Ulaanbaatar with satellite campuses in Zavkhan and Orkhon Provinces. NUM also has several academies of national importance, among these are: Mongol studies, economics, public administration and sustainable development. NUM holds a distinguished place in Mongolia, being the nation's first university as well as a parent to many of the country's other leading universities since many of the country's higher education institutions can trace their ancestry back to NUM's faculties and sub-institutes; these include: The University of Science and Technology, University of Medical Sciences and University of Life Sciences.

Although NUM is established as a public university, private funds are its primary source of funding which mainly consists of student tuition and fees. Most programs are taught in Mongolian; however, there is significant academic use of English. Courses are provided during Fall and Spring semesters; no Summer semester is offered.

Several major reforms have been made by NUM since its establishment in 1942. One reform was the implementation of the "Liberal Arts system" in 2016 which requires all freshmen students to enroll in general core courses. According to the Liberal Arts education system, freshmen students at NUM take part in general core courses including natural science, social science, science of humanities, civil education, research methods, foreign language, and physical education and health sanitation. After the first academic year, students choose their major based on the achievement in the general core courses. From the third semester, students take part in professional courses associated with their major.

Each academic program of NUM determines its own program goals and objectives by considering the prospective "future graduate student figure" according to the Conceiving – Designing – Implementing – Operating (CDIO) teaching method. The CDIO method was established in 2000 by an American and three Swedish universities to improve the teaching of engineering by describing a comprehensive set of knowledge and skills that graduates of engineering programs are be expected to master (Hermon, McCartan & Cunningham, 2010). The CDIO method focuses on the ability of putting theory into practice as well as defining learning outcomes and their method of assessment to ensure that both the teaching and learning aspects of a program are met (Crawley, 2001). Thus, each NUM department, including DPA, develops and implements their respective academic and professional programs in accordance with CDIO principles, has their own students' affairs office, and is responsible for ensuring that quality control standards are met or exceeded. Also, in accordance with CDIO principles, several different types of surveys of students, faculty, graduates, employers are regularly undertaken to evaluate the public administration program.

The DPA was established in 2011 with three purposes; first, to prepare students for civil service careers in Mongolia, second, to provide ongoing learning and training to existing civil servants as a way for improving the profession of public administration, and third, to advance academic research in the field of public administration. Later, a fourth purpose was added which consists of forging cooperative academic relations with universities of other nations as well as providing program development assistance to international universities, primarily in southeast Asia. Indeed, in less than ten years DPA has entered into cooperative agreements with universities in Germany, Korea and United States. Most recently, DPA assisted Mean Chey University of Cambodia with the development of its public administration Bachelor's study program.

The DPA began its academic program with four professors and lecturers and sixteen freshmen students. It has grown significantly and has added both Master's and Doctoral programs. The public administration program of NUM is accredited by the National Council for Education Accreditation of Mongolia. The program has seen steady growth over the years as illustrated in Table 1, though its student population is a small component of NUM's overall student body (See Table 2).

In January 2021, the public administration program gained an additional 151 Bachelor's students, 31 Master's students and 12 Doctoral students. The Department's student count actually increased during and after the pandemic while the NUM's overall student count decreased suggesting that the program retained its relevancy and interest. The number of courses by degree type and semester are shown in Table 3. The Department sponsors an annual international conference, NUM Leadership Conference, in October of each year, which addresses topics of international interest in the field of public administration.

Table 1. Student Population Count by Degree Type – Department of Public Administration (2018-2021)

Public Administration Program by Degree Category	2018	2019	2020	2021
Bachelor Students	127	130	148	151
Master students	31	31	44	81
Doctorate students	20	28	39	49
Total Students	178	189	231	281

Source: Annual reports of DPA from 2018, 2019, 2020 and SISI data - February, 2021.

Table 2. Student Population Count – National University of Mongolia (2018-2021)

NUM Student Count by Degree Category	2018	2019	2020	2021
Bachelor Students	16,035	16,657	16,884	15,222
Master students	3,011	3,151	3,475	3,395
Doctorate students	840	911	1,053	1,004
Total students	19,866	20,719	21,412	19,621

Source: Annual reports of NUM from 2018, 2019, 2020 and SISI data - February, 2021.

Table 3. Course offerings by Degree Type and Semester by the Department of Public Administration

Degree Type	Autumn semester	Spring semester	Total
Bachelor	10	8	18
Master	5	5	10
Ph.D.	4	2	6
Total	19	15	34

Source: Department of Public Administration, National University of Mongolia, 2021.

The DPA has designed its public administration academic program in accordance with NUM's CDIO teaching method standards. The Department's CDIO teaching methods consists of using project-based and case-based examples to illustrate public administrative processes and challenges. The DPA relies upon several approaches to regularly evaluate program effectiveness, including the use of: survey questionnaires of students, professors, lecturers, and graduates. In addition, employers of graduates are interviewed to determine program quality as well. These methods, both teaching delivery and program evaluation, became challenges during the COVID-19 pandemic.

How organizations such as NUM and DPA respond to the shocks and disturbances caused by the COVID-19 pandemic is related to their resilience and adaptive capacity. Organizations that fail to have suitable levels of resiliency and adaptive capacity are very likely to have difficulty addressing large systematic shocks as created by the COVID-19 event. The inability to adequately meet such shocks may cause the organization to fail to achieve its mission and purpose causing it to lose its ability to thrive in the future. We now turn to a discussion of the attributes associated with organizational resilience and adaptive capacity and those displayed by NUM and DPA during the COVID-19 pandemic.

ORGANIZATIONAL RESILIENCE AND ADAPTIVE CAPACITY

Resilience may be described as the ability of an object or system to withstand a shock and return to its original state (Gunderson & Holling, 2002). A simple example of resilience is the stretching of a rubber band, which depicts a shock, and upon release, the rubber band returns to its original state. An organization may behave in a similar fashion where some external event may create a shock or disturbance which the organization must respond to in order to recover to its original form (Bhamra, Burnard & Dani, 2015). More specifically, organizational resilience is defined as an organization's 'ability to effectively absorb, develop situation-specific responses to, and ultimately engage in transformative activities to capitalize on disruptive surprises that potentially threaten organization survival' (Lengnick-Hall, Beck & Lengnick-Hall., 2011, p. 244). For DPA, organizational resilience would mean the ability to absorb the shocks to its teaching program, adjust to the shocks and engage in transformative teaching and learning practices that not only address the challenges presented by COVID-19 but to do so in a manner that makes its program stronger and more competitive. Also, an organization builds resiliency by learning from the actions it takes to adjust to the external disturbance so that should a similar disturbance occur in the future, it is prepared to take appropriate action (see Figure 1). However, in some cases, an organization does not respond appropriately, or in sufficient time, and as a result may cease operations altogether.

Figure 1. Resilience response process
Source: Adapted from: Bhamra, Burnard and Dani, 2015
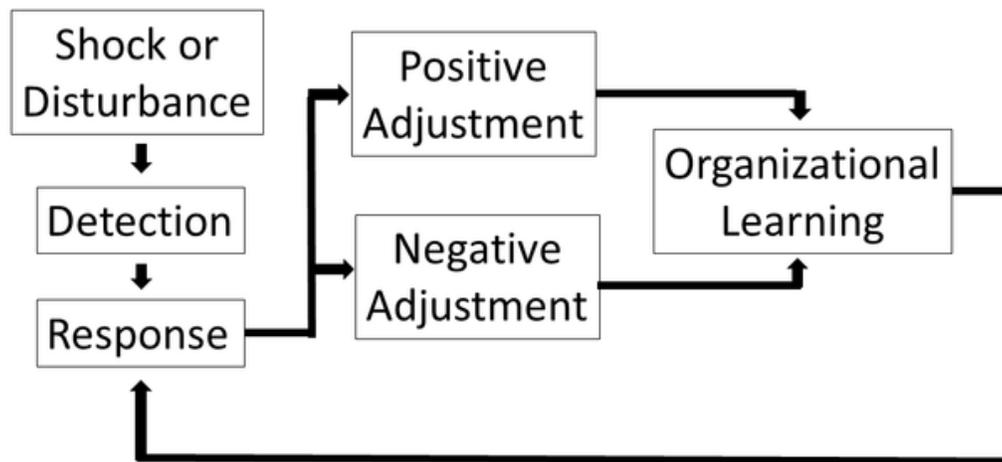
Adaptive capacity is related to resilience. At the organizational level, it is the ability of the organization to learn from shocks and disturbances and to make adjustments or adaptations that allow the organization to transform itself in a positive way so as to absorb the disturbance and maintain its functions (Chapin III, Kofinas and Berke, 2009). Additionally, adaptive capacity contains a learning element which allows the organization to recognize similar shocks or events in the future and initiate appropriate responses. For example, in their study of human resource management practices in Vietnam's tourism industry, Ngoc Su, Luc Tra, Thi Huynh, Nguyen and O'Mahony (2021) found that tourism businesses that deployed short-term strategies that incorporated needed changes remain viable in the future, developed responses

that addressed the immediate challenges of COVID-19 while also creating stronger, more competitive organizations. The COVID-19 pandemic certainly qualifies as a shock and disturbance to both NUM and DPA organizations because it greater disturbed the method of teaching, i.e., elimination of in-person classes thereby threatening the ability to perform core functions. In the next part of the chapter, the shocks to NUM and DPA are described followed by the responses made.

METHODS

The information contained in this chapter is based upon a survey of the personal experiences of the six authors who were faculty and a visiting professor of DPA during the COVID-19 event. Each individual was asked an identical set of open-ended questions that sought their responses and reflections about how the COVID-19 event affected DPA and their ability to teach in terms of the primary challenges, opportunities, successes and failures. The information was collected approximately twelve months after the official closure of in-person teaching courses; covering the period of February, 2020 through February, 2021. The individual responses were summarized in a report that was distributed to all individuals to assure accuracy. The questions were written in English; the visiting professor has native proficiency, three faculty members have full proficiency and two faculty members have limited working proficiency. Those with limited working proficiency obtained assistance, when necessary, from those with full proficiency skills.

COVID-19 ARRIVES

In January, 2021 the tentacles of the COVID-19 pandemic reached into Mongolia. In the initial stages of the pandemic, the situation in Mongolia was similar to other nations of the international community, a general lack of information causing widespread uncertainty, fear and stress which was compounded by continual and conflicting media coverage. Mongolia's education system, a microcosm of the country, faced similar challenges from the COVID-19 pandemic, such as, the uncertainty of continuing coursework, graduation and future planning for students and faculty alike because the national government mandated closures of elementary and secondary schools as well as universities. By mid-February, the Mongolian national government found it necessary to implement strict rules and regulations, including the mandated closures, in order to control the spread of the virus. These rules and regulations directly affected the educational program delivery of both NUM in general, and for DPA, in particular, thereby creating shocks and disturbances to the organizations which challenged their resiliency and adaptive capacity.

Program Delivery and the Challenges of COVID-19

On January 26, 2020, the National Emergency Committee of Mongolia announced to the general public its decision to close all public and private school, universities, and kindergartens until March 02, 2020 to prevent the spread of the COVID-19 virus. The closure decision was subsequently extended to March 30, 2020 on February 26, 2020. At the time the National Emergency Committee made its announcement, NUM was preparing for the Spring session which was scheduled to begin on February 03, 2020. When the school closures were announced on January 26, 2020, DPA had roughly one week to make

the transition from the regularly planned in-person class delivery to a completely unexpected and new method of teaching and delivery of course contents; that being distance delivered through the internet. For faculty, there was a need to immediately adapt from in-person instruction to the new online experience and to do so almost instantaneously. The requirement that all courses had to be delivered online placed both faculty and students under intense pressure. Furthermore, the requirement represented the type of shock that tested the organizations' resiliency and adaptive capacity as it required immediate responses to an abrupt change. The university's administration was also caught off guard and had to quickly develop emergency guidelines for the delivery of online course content which too represented an abrupt change requiring a response. The university's administrative guidelines were promulgated in NUM order No. A/89 which set "The temporary regulations for e-learning at the National University of Mongolia". However, these guidelines were not approved until April 30, 2020 requiring NUM's faculty, including DPA's faculty, to implement the transition to online teaching and distance delivery without formal guidance.

The temporary, informal guidance was, however, very clear and concise with videos on how to navigate and use the NUM educational base system, "SISI", for distance learning. The SISI system was developed by NUM information technology personnel in 2011 and 2012. Certain teaching related data, including schedules of the courses, attendance lists, and integrated grades of students were placed within the SISI system before the pandemic. During the pandemic, faculty were able to upload their videos into the SISI system and send homework to students. However, there is no ability to obtain feedback from students or have chat and discussion sessions with the SISI system. While the SISI system is similar to Blackboard, a virtual educational learning and course management platform that provides for course management and student information systems used by many universities in the United States (Blackboard Learn, 2021), it lacks some key functionality such as the ability to host discussions, chats and journaling. Even with the SISI shortcomings, DPA faculty were able to deliver its first on-line classes on February 3, 2020, less than one week from being notified by university administrative leaders to do so, demonstrating remarkable adaptive capacity. Later in the Spring semester of 2021 as the weaknesses of the SISI became more apparent, NUM decided to use Microsoft Teams for all on-line teaching which is another example of adaptive capacity; that being, the ability to recognize a weakness and make an appropriate response. In terms of organizational resilience and adaptive capacity, both NUM and DPA quickly identified the problem confronting them, COVID-19 and government ordered in-person class closure, developed a reasonable response moving to distance learning via their own SISI system which was then implemented.

The seriousness of the COVID-19 pandemic on the university's operations became evident to university administrators by the end of January, 2020. As the majority of the university's revenues are generated by student tuition (see Table 4) it became obvious to the bursar's office and DPA's budget manager that ongoing funding could become a severe problem, a recognition of a major organizational threat. Therefore, each implemented a budget freeze on all non-essential expenditures, a typical managerial type of adaptive response found in organizations (Hillman & Guenther, 2021; Ngoc Su, Luc Tra, Thi Huynh, Nguyen & O'Mahony, 2021). While the restriction was not supported by all university faculty when it was introduced, the action did help reserve scarce financial resources that helped NUM and DPA weather the financial storm brought on by COVID-19. Never the less, the additional work brought on by the COVID-19 pandemic did result in an approximate increase in 46% of additional expenditures (see Table 5). Most of the increase in expenditures was allocated for materials and supplies to support the courses delivered by DPA, followed by increased compensation faculty for the additional work associated with course delivery even though DPA's compensation standards regulate salary and remuneration

in accordance with performance measurements which are determined by program evaluation measures including survey results. The DPA budget also recognized the importance of continual support of student activities with an increase in funding support.

Table 4. Revenue of the Department of Public Administration (in million tugrug)

Item	2017	2018	2019	2020
Total (tuition) revenue	285.45	357.0	348.0	464.62

Source: Department of Public Administration, National University of Mongolia, 2021.

Table 5. Expenditures of the Department of Public Administration (in million tugrug)

Items	2017	2018	2019	2020
Salary and wages of DPA personnel	81.9	91.2	112.4	136.2
DPA faculty development	11.7	10.2	7.9	9.5
Remuneration for DPA personnel	0	0	4.9	6.2
Expenditure for professional books and literature	7.66	4.48	3.23	33.61
Expenditure for research	2.4	3.4	0.6	2.6
Expenditure for PA students' club	0.4	0.9	0.4	1.3
Total expenditures	104.06	110.18	129.43	189.41

Source: Department of Public Administration, National University of Mongolia, 2021.

The faculty of DPA routinely make personal donations of a day's earnings of their salary to DPA as a means of supporting department-wide goals. The faculty also typically work in excess of a 50-hour work week to fulfill their duties and responsibilities. In response to the COVID-19 situation, the faculty increased their work hours while also donating an additional day's earnings of their salaries to DPA in order to help ease the financial burden created by the pandemic.

The abrupt change of direction from in-person classes to full distance-learning also created numerous challenges. Throughout NUM's history almost all courses have been taught in-person; thus, many of the university's faculty and lecturers had little or no experience with online teaching online or distance delivery when the COVID-19 closure was mandated. This fact was true with the faculty of DPA as well, presenting many challenges to overcome and a very steep learning curve for all faculty. As public administration is within the field of social sciences, it was met with fewer challenges when compare with the natural and applied science programs which require in-person laboratory and filed work participation. Nevertheless, it has its own obstacles to overcome.

When school closures were announced on January 26, 2020, DPA faculty had about one week to make the transition from the normal, in-person teaching format to online teaching even though most faculty had little or no experience with teaching online or with distance learning in general. The situation required that DPA faculty improve their computer skills quickly while at the same time to learn new teaching techniques that are required for online, distance delivery teaching. For example, faculty were required to create videos, as well as use and monitor different e-learning platforms all new skill sets.

The first few weeks of the transition from in-person to online teaching were the most difficult for faculty. The typical process that was followed consisted of first determining the most appropriate manner for delivering content which meant selecting from an assortment of unknown and untested options, including: YouTube videos, audio narrations with slides, Microsoft Teams, Google Drives, Webinars and more. Once an option was selected, the next step typically required rewriting lectures to suit the selected distance learning option. The rewriting of lectures entailed considerable time and effort. The transition to distance delivery also demanded a new way of thinking because instead of writing only the main ideas and concepts on pre-prepared PowerPoint slides that were supplemented with in-person dialogue, detailed information and the opportunity for interactions with students; instead, in distance learning, most of the information to be presented to students must be presented on the slides with a recorded lecture but with no student interaction at all. Therefore, faculty devoted an enormous amount of time rewriting lectures to make them compatible with distance learning and to present the added information normally provided through class discussion. Once a lecture was rewritten and PowerPoint slides created, audio narrations were recorded. Most faculty found themselves making three or four attempts to make an error free audio recording. The use of scripts was eventually discovered which reduced errors and the time spent on re-recording. Other aspects of audio recording that faculty had to be learned included the proper placement of microphones, finding quiet locations and times for recording, eliminating interruptions, voice and narration control and eliminating expressions of hesitation such as saying "um".

During the time faculty were struggling with the difficulties associated with preparing online presentation materials, they also had to solve a plethora of student-based matters. Critical problems that needed to solved included determining an acceptable process for recording the attendance of students, how to distribute lectures and seminar assignments and designing the grading system for each assignment. And once the lecture PowerPoints and audio were posted, much time was then devoted to answering questions and requests from students via email and providing feedback on assignments. Since some students were "locked down" in the countryside, they were unable to regularly access the internet for their assignments. Others were asking questions on how to play the recordings and how to send their assignments in for grading. Because of such difficulties and the newness of the online experience for most of the students, assignments were filed with various levels of success which in turn necessitated the need for numerous emails sent back and forth between faculty and students to figure out how everything worked. Yet, despite all the problems, after about two weeks, most faculty and students were on track on how to use distance learning. Everyone adapted to the situation very quickly and as a result all grew more confident with the new style of course delivery. And, as students became more confident, they became more communicative and more active in their participation, which is a brand new and welcomed experience for DPA.

As troubling as the decision was to faculty to provide all course content to students on very short notice, the effects of the decision on students was also disconcerting. When NUM decided to deliver courses completely online, student housing was closed requiring the vast majority of students to return to their homes. Since more than half of public administration students are from the countryside, online course delivery created additional challenges. For instance, internet access and speed vary greatly from region to region in Mongolia. In addition, Mongolians living in the countryside are, more often than not, from families living nomadic lifestyles, meaning that their place of residence frequently changes due to availability of livestock forage. The nomadic lifestyle meant that many students had to cope with internet services having different levels of service quality. Moreover, as the internet and other communication systems are dependent on line-of-sight wireless technologies, the mountains and valleys found in Mongolia made line-of-sight linkages difficult to make and keep. Indeed, students reported to DPA faculty

that they were climbing to the top of mountain ridges in order to obtain an internet signal – no small feat where winter weather conditions bring snow, ice and severely cold temperatures. Furthermore, if a student living in the countryside was successful in connecting to the internet, the slow and weak internet service typical of rural areas required more than two hours to download a twenty-minute PowerPoint-audio enhanced lecture. Another complicating factor affecting the delivery of online courses was the need for students to purchase internet data from cellphone carriers which added to monthly educational expenses. In addition to the challenges of affordability and access to internet services, students also faced issues in completing their assignments, preparing for examinations, and fulfilling matriculation requirements because they were at home and thus available, and expected, to participate in the daily work common to pastoralists homes. DPA faculty attempted to address these issues by instituting more lenient assignment due dates, providing more feedback on assignments and through numerous e-mail exchanges.

The closure of student housing created further difficulties for the Department. On average approximately 1,500 students live in the dormitories at NUM which is about seven percent of the entire student population. When the first nation-wide lockdown and university closure occurred, the Spring semester had not yet begun and students were at their homes, most of which were located in the countryside. So, NUM arranged that students would not come to the main campus in Ulaanbaatar during the Spring semester 2020.Therefore, having student's marooned inside university dormitory facilities did not present an issue for the Spring 2020 semester.

A different story; however, took place when second national lock-down was implemented on November 11, 2020 because students were using student housing during the Fall semester. Students living on campus presented challenges common to most universities with student housing; that being, how to manage students in residence halls. NUM took the following management actions:

- Students were restricted to their residence halls and dormitory rooms;
- NUM provided food, face masks, toiletries, sanitary products, etc.;
- Individuals donated certain foods, face masks, toiletries etc.;
- NUM reinstituted university-wide distance / online delivery of course content; and
- NUM organized the ability for students to be tested for COVID-19 with the State Emergency Council of Mongolia; and
- After being tested for COVID-19, students who received negative test result, were allowed leave the residence halls and return home. The last group of students left the dormitory on 9th December.

Because NUM closed the residence halls, it decided to return the housing payments to the students. Rather than making direct payments to students, NUM returned the pro-rated amount of dormitory expenses to each student's SISI accounts. Thus, the funds could be used to pay associated fees of the next semester's courses/subjects. However, students who were in their last semester, did receive a full cash reimbursement.

Another major challenge for students was the inability to access the university library. Without access to library materials, students were handicapped in fulfilling their assignments. The lack of library access was an especially difficult challenge for graduating students some of whom were required such access to write their theses in order to graduate. Faculty members sought to fill this void by sending soft copy materials to those writing their theses. Students taking DPA online courses, on the other hand, were directed by faculty to online educational websites as substitutes for library materials.

Not only were faculty unprepared to move to an online educational environment, the majority of NUM and DPA students also had little, if any, experience with online or distance delivered courses. Initially both faculty and students relied on the university's SISI system for all educational learning activities as it is NUM's official system. The primary drawback of the SISI is its inability to provide for faculty-student and student-student discussions. This drawback caused NUM to move to Microsoft Teams which enhanced distance learning abilities through its chat, collaboration, file sharing and video conferencing features. Other advantages of using Microsoft Teams were that all NUM students already had direct access via their official e-mail accounts which were Microsoft-based (Office 365 Cloud Service). Also, and very importantly, Microsoft Teams may be used on desktops and laptops but also mobile phones which are more readily available to students. The collaboration feature of Microsoft Teams allowed for group formation so that there was an opportunity for student-to-student dialogue which is a critical not only for learning purposes but also to avoid alienation and depression that is associated with loneliness often fostered by distance learning conditions (Yuan & Kim, 2014). In addition, the Microsoft Teams software, through the chat feature, allowed students to communicate directly with their teachers which dramatically improved the delivery and efficacy of distance delivered courses. And as faculty became more informed and comfortable with the new software, they were able to explore other options such as Classroom Google thereby further enhancing the educational experience for students while at the same time improving overall learning. And lastly, Microsoft Teams provided support for faculty administrative chores through its ability to create meeting attendance lists and attendance registration, for instance, with the ability to seamlessly transfer this information into the NUM SISI system. Thus, attendance and grading became much easier to accomplish.

An issue that has not been fully resolved by DPA is the provision of internships. As taught by DPA, and in accordance with CDIO teaching principles, the public administration major requires practical experience for the furthering the academic knowledge, in other words, to see how theory may be put into practice. The conditions for controlling the COVID-19 pandemic made things impossible for those students who needed to fulfill the major's requirement to serve an internship within a public organization. Therefore, DPA continues to explore alternative means for fulfilling the internship requirement.

As time progressed, both faculty and students became more familiar and comfortable with the online teaching methods. With familiarity came more spontaneity and innovation as demonstrated with experimentation with different software packages, different methods of student-faculty communication and assorted approaches for student participation. It was during the COVID-19 pandemic that DPA successfully hosted its first ever diploma thesis defense using an online format which was new and exciting to all who participated and revealed in a positive way that you can be miles away still accomplish your task. Now, both faculty and students view online and distance delivery in a new way and truly believe that e-learning will continue to be developed and used by DPA.

ENHANCING ORGANIZATIONAL RESILIENCY AND ADAPTIVE CAPACITY

A key aspect of organizational resilience and adaptive capacity is the ability of the organization to identify the appropriate response to the shock or disturbance and to learn from the experience so that should the same or a similar shock reappear in the future, the organization is prepared to respond as illustrated in Figure 2. In this section, the lessons learned, or in other words, the adaptations used by DPA in responding to the COVID-19 shock are reported.

Figure 2. DPA adaptive response process
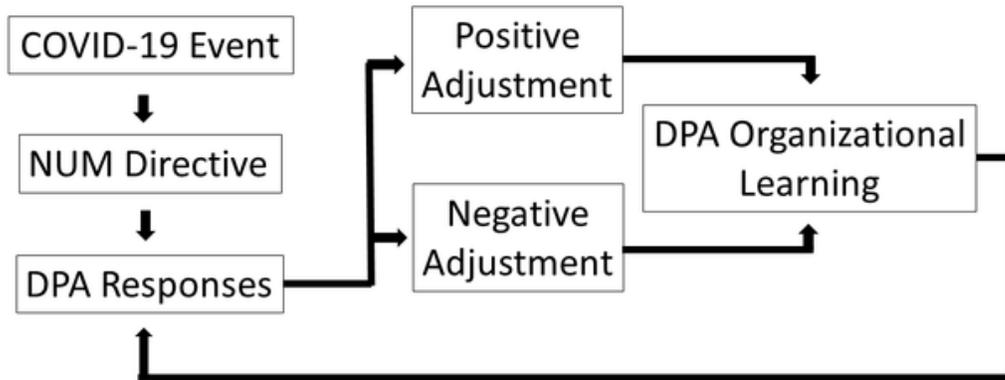
Lessons Learned

The COVID-19 pandemic required that NUM and DPA take immediate and abrupt action to move from in-person coursework to online, distance delivery of coursework in order to continue the mission of improving the lives of Mongolian citizens through education. The shocks associated pandemic was a clear test of the organizational resiliency and adaptive capacity of these organizations. The effort to adapt to the new operating environment can be considered successful, although it did have challenges. Some of these challenges can be described as weakness in organizational resiliency that were exposed by the COVID-19 event. This section describes the primary weaknesses identified, the lessons learned and adaptations made by NUM and DPA through this experience.

- Lengnick-Hall, Beck and Lengnick-Hall (2011) identified in their review of the organizational resilience literature that one perspective of organizational resiliency consists of identifying new opportunities and discovering new capabilities. This phenomenon was exhibited at DPA as expressed by one of its faculty members who stated, "Even in a bad situation, there's always a positive side. During this school closure period, we were pushed to try distance learning, this push will definitely have a good effect on our university's future digital education program as well as our department's overall abilities." The COVID-19 emergency, like any emergency, creates opportunities for advancement, to identify things that should be changed or revised and to make these needed changes. It is critical that these opportunities be recognized and appropriate actions taken so that the organization build adaptive capacity and becomes more resilient and therefore sustainable. Moreover, the statement highlights the importance of a positive attitude when involved in an emergency. Positive attitudes are related to creative thinking which is necessary for effectively managing the disruptive challenges brought on by emergencies. Organizations that place an emphasis on maintaining positive attitudes, an enjoyable working environment and a willingness to accept change are much more likely to successfully meet the challenges brought on by emergencies (Gupta, 2011). Maintaining this environment of teamwork, positive outlook and acceptance of change was found to be an important feature of DPA's successful adaptive response to the COVID-19 situation.

- The DPA wrestles with the challenges faced by most academic organizations; that being, faculty are already managing heavy workloads and asked to complete their work in a high-quality manner, leaving little time for ongoing learning and exploration of their craft. Allocating time, on a regular basis, for training, skill development and strategic planning would help prepare DPA for the future and for future emergencies. Moreover, a key element of organizational resiliency is ongoing learning and considering the future which Lengnick-Hall, Beck and Lengnick-Hall (2011) describe as building the capacity for resilience.

- NUM failed to provide adequate support and guidance to faculty that also had to manage disrupted household routines. For example, faculty who were instructed to immediately move their in-person courses online and after the closure of the university, had to do so from their homes. Yet, at the same time, faculty had to manage other family related COVID-19 related disruptions such as the continual education of their children who were also attending school through distance delivery or readjusting due to the unanticipated job loss of a spouse. The provision of counseling services would have helped faculty better manage these heavy workloads and competing stress inducing demands.

- The DPA did have the necessary online tools available to them for making the transition to e-learning; however, faculty were not using these tools on any regular basis. Thus, when it became a necessity to use these tools they had to be learned "on the run". Indeed, the workload of faculty increased exponentially during the COVID-19 situation due to the need to learn new software in order to make videos, use and monitor training platforms, all within a very short period of time. This learning curve could have been less steep had a continual learning process been implemented by the department and followed by faculty. Faculty have to manage many demands on their time, including: course preparation, student counseling, journal article writing, ongoing learning and research to name only a few of the demands; plus, there must be time for family, personal life and recreation. Providing for regular group discussion of how best to manage these competing demands might improve faculty accomplishments, acknowledge the importance and influence of non-work demands, while at the same time make everyone aware of the tools that presently exist and the need for learning how to use them.

- The DPA would have been better prepared for the COVID-19 shock had it already been using online tools and distance delivery in its academic and professional training programs; in essence, building its resilience and adaptive capacity. Even though distance delivery of educational and professional training content is a standard practice for many institutions of higher learning, DPA was not doing so (with the exception of three courses led by a visiting professor) primarily because implementing such a program requires an additional investment of funding, faculty as well as dedicated time and effort. DPA has also recognized that it is counterproductive to attempt to maintain the existing level of in-person related workloads while adding on another major amount of work. The COVID-19 experience and its newly developed expertise in distance delivery has now created the environment to re-evaluate how DPA delivers its courses while at the same time making the department more competitive in the educational field. In addition, maintaining its expertise, of both in-person and online teaching, may keep a future emergency from becoming a calamity.

- Distance teaching as required by the COVID-19 pandemic did create several positive effects because faculty had to focus on delivering high academic content in a new way. For example, the distance teaching improved teaching skills such as preparing lectures in a more concise manner.

Also, distance learning required the acquisition of new technical skills, such as becoming proficient in new recording and presentation software.

- The emergency required DPA to quickly develop the platforms for faculty to place their videos and course materials online. The speed in which this effort occurred did not allow for consideration of other important topics. For instance, the protection and ownership of intellectual property rights was not considered early on but now needs to be addressed and done so on a university-wide basis.

- Another need that was initially ignored was organizing and scheduling events that are vital to a well-rounded educational experience, such as annual conferences, ongoing accreditation of professors and lecturers, ongoing research and the development and submission of peer-reviewed journal articles. What DPA learned, is a standard element of disaster response planning; that being, while taking action to address the immediate effects of an emergency, some personnel and time must also be allocated to recovery and the future (US Department of Homeland Security, 2017). So, during the early stages of the COVID-19 response, DPA focused exclusively on distance delivery of course content. Once this task was being implemented, it began to place attention to the other facets of its educational mission such as planning for its annual international conference.

- Information sharing with students, by both NUM and DPA is not sufficiently developed leading to delays in communicating important information and creating unnecessary confusion and uncertainty. More attention needs to be paid to providing students with the same level of communication and information that is presently provided to faculty and university administrators.

- The COVID-19 experience, and rush to move to an online teaching environment, emphasized the need to both provide and standardize instruction and guidance to faculty in regards to training activities. When the decision was made to close the university and place all instruction online, minimal guidance was provided to faculty and as a result, a great variety of approaches and software were used. Now, after a year of experience, NUM and DPA should develop clear guidance on the expectations and standards that will be used to evaluate distance delivered courses, establish preferred software, obtain software licenses and provide the requisite training to faculty and students alike. More specifically, NUM should provide instructional webinar training to all faculty and students in the use of Microsoft Teams software.

- There needs to be a formal acknowledgement that new skills are needed for on-line teaching. Yet, because students and faculty were expecting similar skill development and knowledge as in-person teaching, they are evaluating on-line teaching using in-person criteria and expectations which often yield "lower" results. It is therefore necessary for on-line teaching to have the temporary guidance and rules revised to recognize the difference between the two teaching approaches. The evaluation criteria and methods should also be formalized so that online teaching achieves similar results as in-person teaching and evaluation methods are also made valid and reliable.

- During the COVID-19 experience, planned activities such as faculty accreditation were postponed even through NUM requires that professors be evaluated every five years and lecturers evaluated every 3 years. NUM now must return to its regularly scheduled accreditation process but must also revise the criteria used so that the evaluation process reviews the ability of faculty to participate in the e-learning environment.

- The online experience also reaffirmed many of the key ingredients for successful distance delivery of classes as described by Boettcher, & Conrad, (2016). Even though this information is standard to the world of online teaching, much of it was knew to the faculty of DPA.

- Long before the COVID-19 pandemic related school closures, NUM and DPA faculty and administrators were well aware that distance delivery had become a standard approach for institutions of higher learning. However, the lack of financial resources, time, and need to fulfill existing duties and responsibilities kept faculty from becoming competent in online teaching methods and distance delivery of coursework. Even though some DPA faculty had some familiarity with distance learning as they were co-teaching distance courses developed in collaboration with a visiting professor. An important lesson learned is that adequate time should be allocated to strategic planning and initiatives so that future challenges and opportunities are identified and reasonable methods are created to address them, in other words, dedicated time and effort is required to build organizational resiliency.
- The abrupt transition to online teaching and distance delivery created much uncertainty and stress for faculty and students alike. Such transitions should be treated as true emergencies which require effective and regular communications and direction in order to fill information voids, reduce misinformation and to provide a sense of understanding and strong management of the emergency (Click, 2013).
- Some of DPA faculty found that taking the time to reviewing good teaching practices, such as Bloom's taxonomy (Mastascusa, Snyder & Hoyt, 2011) which consists of six major categories that are used to develop educational learning objectives and thereby promote subject learning and assessment (Armstrong, 2010) as well as the adopted CDIO standards, was very useful and helped ensure that the new distance learning format and methods were delivered in accordance with high academic standards. The review of basic teach methods is important to organizational resiliency because it allows for:
  ◦ The review of basic techniques and standards while also affording the opportunity to remain current with ongoing changes to the field and the ability to strengthen weaker areas,
  ◦ Reviewing the basics which creates a strong foundation for ongoing learning, and
  ◦ Better understanding of the fundamentals through reflecting upon experience.
- The importance of online library services became very apparent during the COVID-19 experience. Without access to library materials and services, students were unable to adequately complete course assignments, undertake research or complete thesis projects. It is vital that universities recognize the importance online library materials and services and invest ongoing funding to digitalize course textbooks, journals and library holdings.
- In order to deliver excellent online, distance delivered educational and training programs the online platform must be fully functional and have the necessary tools to allow for full participation by both students and teachers. Therefore, adequate funding must be made in online software and internet platforms to make e-learning as seamless as possible as well as enjoyable.
- It is important that the materials, assessments, syllabi for online course are posted early; by doing so PDA faculty learned that the number of organizational questions were greatly reduced. Students who are learning through distance delivery methods need as much information and delivered as early as possible to help them plan and organize. Early posting of these materials also appeared to reduce student stress and uncertainty.
- Reading and case-study materials that are used in the distance delivery environment should posted online or be available through open access. DPA faculty learned to assume that students are unable to access the physical library and therefore should provide digital materials for online courses.

The faculty also learned to post these materials early so that students had sufficient time to download the materials beforehand.

- Assessment rubrics should be provided and posted so that students understand how their assignments and participation in the course will be graded. In addition, the rubrics should be of sufficient detail so that students are not confused or ill-informed due to vague instructions. Providing, and explaining, how the rubrics are used reduces student anxiety and uncertainty.

- Because of the lack of face-to-face contact between faculty and students, feedback given on assignments and examinations becomes much more significant in learner progression. Detailed feedback, positive comments and identifying areas for improvement are vital for a complete learning experience. Students have a high need for knowing how they are doing, what their grade is; so, this informational void should be filled through feedback.

- Creating and delivering an effective distance delivered course requires a large amount of time and effort. So, DPA faculty learned, early on, to take the time to carefully plan out lectures and associated PowerPoints. The use of lecture scripts was found to make recording more efficient and reduced errors. And faculty also learned that it was necessary to allocate sufficient time for revisions and redoes.

- NUM established guideline allowing videos to exceed 30 minutes in length. However, DPA faculty kept video length to between 15 to 20-minutes, as this timeframe is the recommended standard (Burch, 2021) and was found to be most aligned with student attention spans and ability to download from the internet. Lectures more than 20 minutes were simply broken into several 15 to 20-minute segments.

- Whenever possible, variety was added to the distance learning experience by using polls and other interactive tools rather than relying solely on verbal responses; especially with larger classes. The different methods of interaction allowed for more active participation and learning; plus, it seem to make the experience more enjoyable for students and faculty alike.

Bhamra, Durnard and Dani (2015) identified four criteria for measuring the type of responses that may be considered evidence of resilience and adaptive capacity in organizations. The four criteria include: 1) exposure to a significant threat or event, 2) achievement of critical success factors within response activities, 3) capacity to alter function and operations and 4) ability to develop from experiences. In addition, Witmer and Mellinger (2016) identify other important themes of organizational behavior that are shared by organizations practicing organizational resilience and adaptive capacity; among these are: a commitment to mission, improvisation, and hope and optimism. This section discusses each criterion and theme and the responses made by both NUM and DPA to the COVID-19 emergency that demonstrate the efforts made to advance organizational resilience and adaptative capacity.

The COVID-19 pandemic represents a significant threat, or event, that took place to the ongoing operations of both NUM and DPA. Indeed, the regular on-going operations typified by in-person coursework was abruptly ended with a requirement to move to distance learning methods in a matter of days. The event was experienced by the three main groups of the organization, including administrators, faculty and students. For every group was threatened; administrators had to manage with the challenges caused by lost revenue, faculty were faced with implementing untried teaching methods and students were challenged with new course delivery approaches. These changes created great uncertainty and risk.

The responses made by NUM and DPA and their organizational members, did achieve critical success factors, partly due to a strong commitment to the mission of providing quality higher education and maintaining hope and optimism. The commitment of NUM and DPA to their mission provided focus and meaning to all members of the organization. In other words, there was never a question raised about continuing the educational program, it was assumed by all that a way was to be found. And the optimism of the faculty created a working environment that fostered collaboration, generated a "can-do" atmosphere which in turn generated creative solutions rather than finger-pointing and chaos. Thus, critical success factors such as continuation of coursework, course progression and graduation of students, and in the case of DPA, actual student body growth, were achieved.

NUM and DPA clearly demonstrated the capacity to alter functions and operations to meet the threat posed by COVID-19 and to do so with success. Altering functions was not easy and new skills had to be learned "on the fly"; yet these challenges were met. For instance, faculty realized that they did have the necessary digital tools in the form of the existing SISI system to implement distance learning they were just unaware of this capability. Moreover, the faculty improvised and experimented as well for example, by using new tools such as Microsoft Teams, by varying their video lengths to better meet student technological limitations, and by revising lectures to better meet the needs of students that now lacked the ability to spontaneously ask questions that is afforded by in-person classes. Also, when faced with the government mandate to close its residence halls, NUM was able to quickly meet the mandate while enacting procedures that limited the financial dislocations and hardships to itself as well as its students.

Both NUM and DPA have been able to further develop their abilities from the COVID-19 experiences. The various lessons learned, described above, document many of the abilities and the additional capacity that are new to the organizations. Moreover, the experiences of the COVID-19 event resulted in the faculty of NUM and DPA learning new skills that has now created the additional ability to be more competitive in the academic market since courses and professional training may now be offered online, in a blended fashion (online and in-person) as well as the traditional in-person format. This newly created ability also allows NUM and DPA to broaden their reach to prospective students and to the professional community that reside outside of the capital city. Other lessons learned, and increased abilities obtained, are related to viewing tools that existed before the shock, such as the SISI system, in a new way. For example, some faculty were unaware of the full capability of the SISI system until the COVID-19 shock caused them to fully explore the system. Also, the faculty, and students, have become more adept with the various nuances of distance learning and therefore can concentrate their energies on teaching and learning rather than being distracted with attempts to understand how the digital tools actually work. In sum, the COVID-19 pandemic presented a great chock that was effectively managed and new adaptive capacity generated. Indeed, there has been silver linings on the storm clouds of the COVID-19 experience.

CONCLUSION

Like most universities throughout the world, the COVID-19 pandemic created much disruption, confusion and uncertainty. NUM and DPA, also like many other institutions of higher learning, rushed to move traditional in-person courses to an online teaching environment. DPA accomplished this feat in about ten days. The transition had many challenges, required a great amount of time and a willingness by faculty to innovate and embrace change. DPA was successful as measured by its ability to not only continue its

program but to grow it as demonstrated by the increase in its student body for all three-degree categories. Furthermore, both student and faculty report an acceptable degree of satisfaction with the results of the transition to online coursework. The lessons learned by NUM and DPA may be used by other organizations of higher learning to navigate stressful conditions while building resiliency and adaptive capacity.

Yet, much still needs to be done. Library access and services must be upgraded to complement the e-learning experience. More specifically, the ability of NUM and DPA to full take advantage of what was learned in responding to the COVID-19 shock is contingent upon library services being able to fulfill the needs of students and faculty through digital methods. In project management parlance, upgraded digital library services is a critical path element. New methods of evaluating faculty and course content understanding by students needs to take place as well as to ensure that quality educational practices and results are being provided. Appropriate training of faculty in the use of new software as well as standardization of online software programs need to be established and implemented. In addition, attention must be placed on more long-term issues such as ownership and protection of intellectual property rights and such issues must be resolved.

In closing, the COVID-19 pandemic created a troubling situation for NUM and DPA. However, with ingenuity, patience and a desire to succeed, excellent results were achieved. Both organizations were able to successfully respond to the shock presented by COVID-19 by designing and implementing relevant methods thereby building adaptive capacity. A larger decision now confronts NUM, and DPA in particular; that being, taking all that has been learned and the new capabilities obtained, and embracing the online format by offering a menu of in-person, blended, and complete online educational and professional training programs and thus making it more relevant and competitive in our contemporary world.

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KEY TERMS AND DEFINITIONS

Adaptation: A change or modification taken by an individual or organization to improve its performance and survivability in its operating environment.

Adaptive Capacity: The ability of an individual or organization to recognize a threat or opportunity and to take the appropriate response(s) in order to successfully adjust.

Blended Learning: A combination of traditional in-person (i.e., face-to-face) learning and online (i.e., digitally based) learning.

In-Person Learning: The traditional form of teaching that is conducted primarily in-person or face-to-face between instructor and student.

Ongoing Learning: The ability of an individual to continue learning over their life.

Online Learning: A digital form of learning that takes place over the Internet. Online learning is also called e-learning and distance learning and may take place asynchronously or synchronously.

Organizational Learning: The ability or process that is used by an organization to improve its abilities through experience and knowledge as well as how the new abilities are transferred throughout the organization.

Organizational Resilience: The ability of an organization to absorb a shock and to maintain its ability to fulfill its original duties and responsibilities.

Resilience: The capacity of an individual, community or organization to absorb a shock and to continue their basic functions unimpaired.