

 LEADING STRATEGIES

Reimagining Higher-Ed in the New Era: Upskilling Competencies toward Enhancing Enrollment Management

By Shaimaa Nabil Hassanein

Higher education institutions have the societal role and responsibility of providing guidance to their members and the surrounding community. Institutions endeavored, and are still striving, to illustrate multi-faceted practices that can be integrated into the founding principles of an educational institution. And that can pave its way through the dynamic and ever-evolving process of upholding an outstanding position among top notch universities worldwide, imprinting the technological transformation, creating degrees that suit the new era's needs, and granting equitable access for learning to preserve the social balance. This article provides a comprehensive outlook on higher education's role in defining, setting, and navigating the new normal through upskilling the three constituents of the learning arena—faculty, staff, and students—and the community as a whole while managing students' enrollment and retention.

Marking the start of 2020, the coronavirus outbreak significantly impacted higher education and students across the globe. Students' study plans were impacted by the rapidly escalating global health emergency. Universities found themselves in a challenging situation that inevitably imposed immediate alteration of potential enrollment plans and adoption of more compatible educational methods. Although this pandemic has enormous negative effects on the world, it has also offered an indispensable opportunity; it forced the whole world

to move in a different path that changed the hierarchy of power and granted equitable educational access through technology. In addition, it enforced all institutions—especially educational ones—to move with the revolutionary flow of technology that they had been reluctant to follow, and have been slower than their students to adapt. Hence this pandemic is considered a game changer. With the widespread use of online and virtual space, institutions will strive to reach technolog-

ical cultural competence, and will search for means to retain their students' satisfaction and wellbeing.

It is noteworthy to admit that universities will spend a considerable amount of time navigating their way through this pandemic. During the past year, universities had to pivot to implement effective virtual and digital strategies, generate new tactics to reduce the impact on student mobility, and open the doors to new practices during and after the immediate threat subsided. The pandemic revealed the essential role of several aspects: equity, inclusion and diversity, intercultural competence, empathy, consideration, and digital transformation and data visualizations.

This article will discuss the different phases all institutions will go through, what path(s) higher education opted to follow, how educators can be prepared and flexible, and the new skills and cultures that will enable higher education to navigate the new normal. Finally, this article will discuss the impact of these acquired skills on strategic enrollment management.

Planning Framework

The lockdown experience has granted every one of us a prospect to contemplate, to research, and to understand the concept of agility in such unique situations within the educational context. "Scholars say shutdowns and remote work yielded insights for employers, workers" (Pazzanese 2021). According to the Postpandemic

At first, universities responded to the lockdown by remotely maintaining essential activities and functions. The reaction was to protect everyone's health and safety. Then, came the recovery phase, which marked a restart of activities, a reopening to operate totally online or through adoption of a hybrid model, while taking precautionary measures. Next, institutions are, and will be, experiencing renewal, which is a time to develop innovative actions and to use the previous two phases in setting an outlook to serve the evolving educational needs and to proceed into the future with more agility and resilience.

Figure 1 shows both the Post Pandemic Planning Framework and the most common paths and desired outcomes to exit the pandemic, which will be discussed and elaborated on from a higher education perspective in the following section. This section highlights the most common actions, processes, and practices adopted by higher education to endure the "respond," "recover," and "renew" phases.

The Respond Phase

Once the pandemic hit, governments initiated lockdowns to reduce infection rates by limiting physical human interactions. At educational institutions, all activities grinded to a halt, and instructional activities turned online. During this "respond phase," educational leaders made short-term decisions about business processes and educational policies and practices; assessed the immediate impacts of the lockdown; and adopted a high level of flexibility and agility.

Based on Gartner's (Nielsen, LeHong, and Smith 2020) research, this phase often takes on two major forms: immediate negative impacts and immediate positive effects. In educational institutions, some of these effects were as

shown in Table 1.

The Recover Phase

After a period of time into the lockdown, educational institutions were forced to reopen, even partially, and

TABLE 1 ► Immediate Impacts of the Pandemic

Immediate Negative Impacts	Immediate Positive Impacts
► Increase in withdrawals ► Lower enrollment ► Abrupt halt to face-to-face events	► Usage of technological infrastructure ► Incorporating EdTech, digitalization, and automation ► Lower costs (internet and electricity)

Planning Framework research (Nielsen, LeHong, and Smith 2020) (see Figure 1, on page 19), enterprises go through three phases: respond, recover, and renew. Afterward, they navigate different paths through the pandemic and any potential forthcoming crisis.

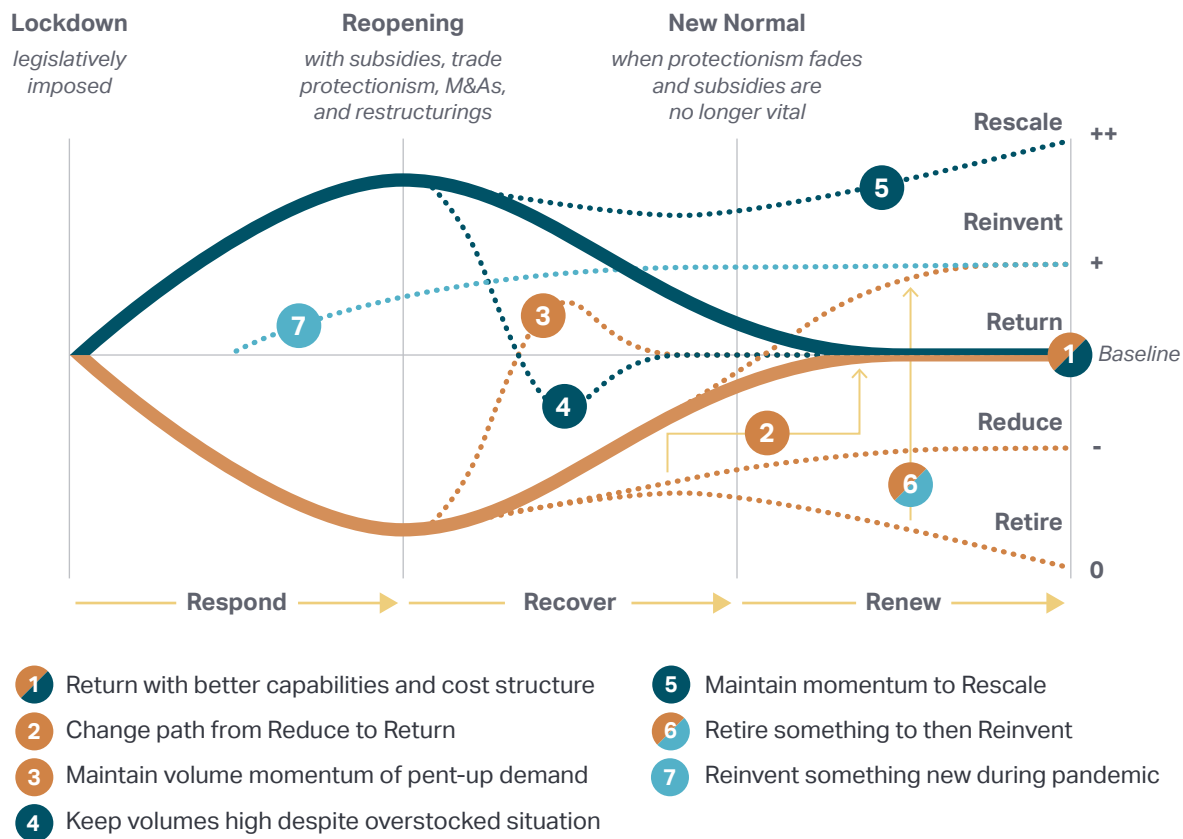


FIGURE 1 ► Postpandemic Planning Framework/How the Enterprise will Exit the Pandemic

move into the “recover phase.” Educational leaders, like all organization leaders, were aware that life would not go back to “business as usual” or back to normal. To hamper the recover phase, leaders were advised, by Gartner, to factor in the following dynamics:

- Reopening of society will not occur as a single event.
- Reopening for individual enterprises may also occur as a series of events.
- Reopening could be immediately followed by another lockdown.
- The recover phase will be almost as chaotic as lockdown.
- The recover phase may challenge enterprises both operationally and financially.
- The recover phase will be mired in a constantly changing financial and trade landscape.

So how will higher education react to the aforementioned dynamics, and what are its consequences? The following points identify some of higher education’s response actions to these dynamics:

- Reopening of society through multiple events rather than as a single event. Educational institutions had to follow, as all other organizations, the governmental decisions on which sectors are essential to reopen and in what region as well as which sectors are not and will take a longer time before opening back up.
- Reopening for individual enterprises may also occur gradually. For educational institutions, leaders had to decide which areas/departments and service divisions should be considered essential and reopen those with additional precautionary measures (for example, counseling centers, libraries, labs, etc.) as well as decide on

other nonessential divisions to be opened later (such as: sports complexes, face-to-face classes, etc.). Leaders had to remain vigilant, agile, flexible, and swift in their actions and responses throughout the pandemic.

- Reopening followed by another lockdown or multi-wave lockdown scenario. Visualizing, defining, and settling in the new normal will remain the long-term objective for all businesses. However, as the region, and higher education, oscillate between lockdown and reopening, no progress should be taken as a given.
- The recover phase is as chaotic as lockdown. This will be obvious in educational institutions when the need to scale back up to meet students' pent-up demand arises and overwhelms the faculty and administrative staff.
- The recover phase will not be a uniform one; this will inevitably strain enterprises both operationally and financially. Educational institutions found themselves wondering, in terms of operations, how they could provide quality education and services to fulfill students' needs and lead them successfully through their learning journey; in terms of finance, how could they secure finances, to keep serving the students and the community as a whole in a professional and exclusive manner.
- The recover phase will be mired in a constantly changing financial and trade landscape. This will affect international students' mobility and enrollment status. Educational institutions should be aware of all these regulations to communicate with their continuing and prospective international students. Meanwhile, institutions concentrate on recruiting local students or offering online degrees until the travel bans and any other governmental restrictions wane.

The Renew Phase

As soon as a more stable and "new normal" environment appears, the enterprises will be enforced to move into the renew phase. The Gartner report (2020) pinpointed

that "once the chaotic environment of the recover phase settles down, enterprises will experience the real "new normal." Jeffrey Wheatman, research vice president at Gartner, stated: "The future starts to become more planable" (Gartner 2020). However, businesses as well as educational institutions are already immersed into the renewal phase. The abrupt necessities of the new era forced all institutions to adopt new practices and techniques in offering their products and services. Nonetheless, institutions need to be flexible and nimble, as some of these new practices, if not all, have to be modified and tweaked when new needs are revealed.

At the time the pandemic subsides and everything is somewhat settled, higher education will likely accelerate plans and strategies to renew themselves. The strategies would be devised only when: a) the competitive landscape becomes transparent, less chaotic, and driven by economic forces only; b) students' demand and enrollment figures fluctuate less and become more stable; c) students' new digital needs become obvious, attainable, and fulfilled; and d) staff and faculty competencies are aligned.

Moving from the discussion of the three phases, the following section looks at the five main paths through the pandemic proposed by Gartner (*see* Figure 1) (Nielson, LeHong, and Smith 2020) and the implications of each path on educational institutions.

Gartner's Description of the Five Paths through the Pandemic

- **Return** (to pre-pandemic levels): "The default path for an enterprise is to return to normal activity levels. During the full and partial lockdown period, impacts may have been drastic, but they are temporary, and life will eventually return back to (a) normal."
- **Reduce** (to levels lower than before the pandemic): This path will be followed if "demand does not return to pre-pandemic levels; supply does not have the capacity to fulfill the demand; and an enterprise deliberately reduces the operations in one area of the business in favor of another."
- **Retire** (because business can no longer be sustained, post-pandemic): "The Retire path is usually taken

TABLE 2 ► Projection of Postpandemic Phases on Educational Institutions (Advantages & Challenges)

Path	Example	Advantage	Challenge
Return	Offering face-to-face classes and meetings, organizing social events, etc.	More engagement, social interaction, and psychological relief that we're back to normal	Faculty, administrative staff, and student needs and expectations have changed. Digital transformation has imposed itself.
Reduce	Lower demand on non-professional degrees	Resources will be directed to professional and undergraduate degrees	Furloughs, upskilling staff to meet the new positions requirements in a short period of time
Retire	Closing certain programs	Looking for new programs, online degrees, blended degrees	Extensive research needs to be conducted in a timely manner to survey the market and offer new programs that match the new careers accelerated in reaction to the pandemic.
Reinvent	Collaboration among the region's institutions and internationally to offer dual degrees	Students benefit from the diversity of their programs.	Speedy negotiations to reach the terms, conditions and accreditation of such programs.
Rescale	Business intelligence and virtual meetings platforms / the high demand on CS and data science	Branded institutional technological infrastructure, attract international students for online degrees / surge in enrollment for these courses	Upskill students, staff, and faculty to use these platforms smoothly / finding reputable faculty members with profound experience to hire

when one or both of these two situations exist: the business or operating models were already struggling prior to COVID-19; the enterprise wants to deliberately sunset a part of the business in favor of moving to a newly reinvented business. Executive leaders shouldn't think of the [r]etire path as entirely negative. It can lead to a deliberate reinvention or selling off parts of the business."

■ **Reinvent** (to be better positioned in a post-pandemic world): "Some parts of an enterprise will take this path to come out stronger than they were before the pandemic. The reinventions typically come from enterprises finding that the current main business model is under (increased) pressure from COVID-19 and that there is a need (or opportunity) to change the business or operating model. This aggressive path is often associated with becoming a more digital business."

■ **Rescale** (to continue to accelerate newfound growth): "This path is taken by parts of the enter-

prise that benefited significantly from the lockdown situation. These enterprises, or parts of them, may have been growing, but COVID-19 is now requiring them to deal with significant, often exponential growth. Therefore, the key for these enterprises is to rescale the business and operating model to handle the vastly increased volume. As a result, enterprises can turn short-term, immediate impacts of COVID-19 into sustainable long-term business".

To manage the abovementioned phases and choose the necessary path(s) to follow with agility, new cultures need to be built, and numerous capabilities need to be acquired and mastered. In addition, real effort has to be exerted to prepare and upskill higher education constituents, faculty, staff, and students, to navigate the new normal. The following section will discuss firstly the necessity of building data and digital culture, how to accept it, demonstrate it appropriately, and benefit from it. Then, the article addresses the steps for pre-

paring students, staff, faculty, and the community for the change and upskilling their competencies to wisely handle the post-pandemic phases and to reach the optimum results:

- Engage in creative strategies to collect and analyze data to determine whether to retire, reinvent, or rescale a program or student support system.
- Consider the multiple factors the students must navigate as they enter the university and adapt to online or post-pandemic university environments (both in terms of student support services and mode of delivery).
- Consider the essential learning students must have to successfully connect and transfer university learning to career goals.

Finally, the anticipated impact of upskilling student, staff, faculty, and the whole community on enrollment management plans will be deliberated.

Building Data and Digital Culture

Data and digital cultures are necessary in making accurate decisions during the three phases of “respond,” “recover,” and “renew,” giving order to the chaotic recovery phase and choosing the suitable path for the present in the renew phase. Moreover, data and using advancing technology is key in improving students’ educational outcomes and optimizing their experience. Likewise, providing data-based models is essential for supporting higher education goals to enhance the efficiency and quality of teaching and learning. In addition, using data and advanced analytics presents the opportunity to more effectively improve the learning outcomes of vulnerable and disadvantaged students. “Everything from student recruitment to curriculum development and partnership management, has the potential to be organized more effectively with the right data strategy” (QS 2020).

To efficiently evaluate the success of the institutional processes, ongoing assessment and action based on the data collected, and the insights reached from processing the data, is needed. Business Intelligence platforms moderated by Artificial Intelligence (AI) are

useful for gathering active data, but most important is to know which data should be collected and analyzed for each assessment stage. Although pre-COVID data models have tremendous capacity to give leaders important insights to help them navigate the crisis and the next normal, institutions should not rely on past patterns to predict the future, given the immense change in students’ enrollment, interests, career opportunities, and travel restraints.

Subsequently, leaders should be prepared to:

- Shore up pre-COVID data models,
- Stabilize new critical models to recalibrate strategies for the changing landscape, and
- Forge new data partnerships.

Collaboration among the region’s institutions and international institutions can provide a threshold for creating a data repository to use on a continuous basis to: build the data, assessment, and digital culture; predict the flourishing future; and confidently construct the new equitable life learning journey for students, faculty, staff, and the community as a whole.

It is pivotal to: introduce plans for promoting alteration, clarify how the future will be different from the past, and categorize the strategies that need to be executed to make that future a reality to higher education stakeholders—faculty, staff, students and community. Although change was inevitable and apparent to all people, the fear of change is an induced feature in most human beings and may hinder progress. Accordingly, institutions need to communicate with empathy, clarity, and reason to convince their stakeholders of the necessity, and benefit of, modification. To prepare them for change, leaders need to troubleshoot in a structured way; the institution has to speak their language, articulate the problem statement, walk them through the nuances, communicate the hypothesis, and choose the appropriate visualization to emphasize the strategies and next steps while continuously and repetitively explaining why the data insight matter to them. Subsequently, stakeholders will be mentally, psychologically, and physically equipped for variation. And to ensure continuity, it is important to monitor and support them.

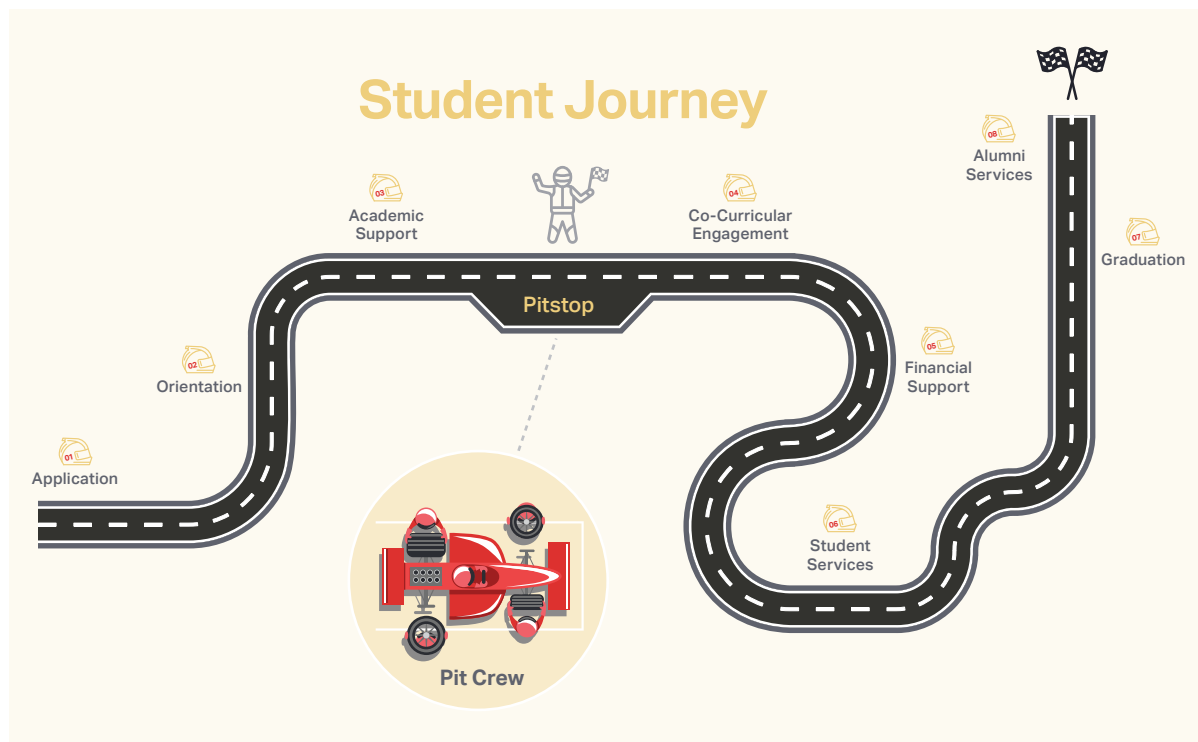


FIGURE 2 ► Students' Journey—Raceway

Introducing Variation through Visuals and Process Mapping

Providing visual information indicates a focus on the big picture and improving the whole, rather than a focus on individual processes (Shou *et al.* 2017). What really inspires innovation is visualizing students' expedition and the role and effect of each staff member along the journey. This type of value stream mapping, or process mapping, is used frequently in industry and visually displays all actions related to completing a process (Alexander and Fadden 2017; Shou, *et al.* 2017, Puckett 2021).

Assisting stakeholders to imagine, visualize, and sense their influence and impact on student journeys would urge them to embark on change enthusiastically, courageously, and steadily. It is rousing for higher education to picture the student success journey as a raceway, where the team's collective effort in offering support to students, in every step of the journey, is like the pit crew that offers car maintenance and the

racer reassurance promptly, efficiently, and effectively throughout the race, to ensure a successful and safe finale. It is deemed necessary for the journey's success that the pit crew be well trained on which data to collect and analyze for each step of the journey. Hassanein (2020) provides the data to be collected and analyzed. This data enables staff to lead efficiently, effectively, and in a timely manner the whole journey and endure variations, foresee challenges and obstacles, and make necessary innovative actions and decisions.

Students' journey—beginning with application and orientation, through academic and financial support and services, and ending with graduation and alumni services—could be a lifelong thrilling experience where faculty and staff collaboration is key in not only reaching enrollment targets and retaining students but also in assisting students to thrive through their academic or lifelong journey steadfastly and successfully. Furthermore, it prepares students to select wisely and accept the subsequent journey(s) that work for them.

Pit Crew's (Stakeholders) Competency

The foremost objective of the edifying and leveling practice for academic and administrative staff is to apprise them with the skills that grant them the compatibility with the digital, interdisciplinary, and intercultural mindset to be competent in piloting the dynamic new era. Accordingly, the goal is to: lead with empathy and consideration; ensure diversity and inclusion; be capable of offering better advising and individualized learning journeys to students; allow students to see the future with fresh critical eyes; and, above all, create global citizens who keep on learning and developing their future selves mentally and psychologically. Furthermore, such leaders help students feel committed toward their society and contribute to their communities by broadening their mindsets, leveraging their skills and, accordingly, their educational/social status so as not to leave anyone behind in this digital revolution.

Preparing the Pit Crew

Certain skillsets need to be acquired and mastered in order to define and navigate the new normal challenges and to proceed into the future with more agility and resilience. This includes professional skills as well as intangible skills that are the core of nurturing people's creativity and intelligence—those that help the learning arena's constituents (faculty, staff, and students) retain their wellbeing and mental health. This also includes offering material resources that are essential to sustain the purpose of leading institutions. It is necessary that stakeholders understand the benefit of adopting new skills on their careers.

To espouse gradual yet accelerated transformation, and to ensure its scalability and generality, institutions may wish to pull together a guiding interdisciplinary team: one with leadership skills, bias for action, credibility, communications ability, authority, and analytical/technological skills. This team would be considered higher education "innovation sprouts," as they are the ones who would lead and pace up the change.

Training could be offered first to the guiding team, who would make sure to communicate their experi-

ence to the institution's members in order to: encourage others to understand; be mentally and psychologically equipped to accept the training; get buy-in; and empower others to act. This creates trust, commitment, and enthusiasm for the whole team. The optimum goal of the training is to persuade faculty and staff with the inevitability of change, prepare them to adopt this change, and be nimble for any upcoming deviations. Subsequently, upskilling staff through adopting new practices for following the right path/s and changing their path/s when necessary helps them better serve students and the institution as a whole. Moreover, it is important to be flexible and agile by using "their learning from this period to ask themselves questions like: What have I learned about what allows people to be productive and have a better quality of work life? And, should I be revisiting the way we do things around here based on that? What have I learned about communicating with my workforce? And what do I want to make sure we continue to do because [the] practice that we developed in this crisis is better than what we were doing?" (Pazzanese 2021).

In addition, the sudden conversion of all activities (classes as well as advising and mentorship) from face-to-face to online can be challenging for faculty, students, and staff alike. The keys to manage this situation are: careful and clear planning, open, continuous, and robust communication, community support, collaboration, and acts of empathy.

The following section defines higher education constituents, the suggested skillset they need to be acquired, and areas of improvement.

Faculty

Definition: Teaching/academic staff within an educational institution.

The aptitudes deemed of utmost importance for faculty members to navigate the new era include:

- Online teaching
- EdTech
- Interdisciplinary mindset

Faculty members have to be directed on the means of how to convert a face-to-face course to online mode

of instruction. It is also essential for faculty to be qualified to communicate clearly and frequently with their students. In addition, they should present class plans to students in advance. Also, faculty need to be guided to: have adaptability with options and deadlines; follow alternative assessment strategies; be aware of students' needs and offer support; and fulfill their individual requirements, where possible, with empathy and thoughtfulness.

Furthermore, each institution desires to select the tools that suit its environment and assist in attaining the institutional strategic targets. These tools, along with a learning management system (LMS), should allow faculty to: communicate and engage with students, share learning materials: record lectures in video, audio, slides, or any other format; offer synchronous and asynchronous classes; upload and grade assignments while offering constructive feedback in the most convenient set-up to the student; and conduct online live discussions. In addition, it is important to clarify the online proctoring solutions that aid faculty members in that regard.

Above all, faculty have to be acquainted with digital transformation tools and feel at ease while using them. Offering pedagogy, information on technology, and remote support to faculty would assist and encourage them to be creative, master the virtual teaching platforms, use visual, augmented and mixed realities (VR, AR, and MR) in their online classes, if possible, and therefore enable a successful smooth and productive transition. It would also enable the creation of innovative teaching methodologies and creative and engaging materials.

Besides offering training to all faculty members on using these tools, it would be beneficial to offer refreshers, articles, manuals, guidelines, and/or webinars to keep faculty abreast of all new methods of teaching online. Also, a one-on-one consultation upon faculty's request would increase faculty's comfort with using online tools and allow them to spend more time on ingenuity and specialized topics rather than struggling to use these tools.

Higher education could build discipline-specific centers, such as business, finance, and mechanical cen-

ters. Faculty members should be guided to lead these centers proficiently, to regularly organize individual mentoring and team workshops for students. These activities would support academic programs through integrating experiential activities into discipline courses.

Finally, it's advantageous for higher education to work across academic disciplines, breaking down silos and bonding disparate strands of knowledge across different fields of study to adopt a multilateral, multicultural, and multidisciplinary approach. As the interdisciplinary mindset is a key to navigate the new era, it would be effective to build collaboration between faculty members from different disciplines. Getting faculty engaged in multidisciplinary projects would enhance their experience, allowing them to feel the empowerment of multicultural backgrounds and diverse skills and how all disciplines complement one another. Accordingly, they will be conscious of the positive impact of interdisciplinary mindset and guide and inspire their students to dive into the transdisciplinary world.

Staff

Definition: all administrative staff handling the educational organization

The capabilities that are crucial for enabling staff members to administer the institutions in a professional and competent manner include:

- EdTech
- Data Analysis
- Artificial Intelligence (AI)

Staff are the backbone within a student-centered institution. Staff progress and performance are key to shaping the new normal. Staff embodies the majority of the pit crew; offer all the above-mentioned training for faculty; devise students' study plans; and advise them.

Accordingly, it's essential to set the institution's adaptation means and leverage staff's awareness of these means to reach the optimum goal, which is student satisfaction and success. This would allow staff to redefine student journeys and offer individualized plans, as discussed earlier. Moreover, it's crucial to enhance staff members' data and digital skills to better serve

the overarching goal, which is accommodating individual educational and developmental plans and students' needs. Educating staff on how to be digitally literate offers capabilities beyond what was once thought impossible when it comes to emerging technologies, such as artificial intelligence (AI), machine learning, Internet of Things (IoT), and data science.

It is believed that "...enrollment management directors are a breed of academic professionals who are enamored with technology and know how to use it. They have a well-deserved reputation for being early and eager adopters of apps, platforms, and tools to help them target and engage prospective students" (Farrell 2021a). However, it is vital to acquaint all staff members, not only enrollment manager directors, with these digital and technological skills to be able to compete in this new era.

Some institutions have the opportunity, financial resources, and the technological infrastructure to use VR, AR, and MR to conduct professional customized training and offer it to all staff, at all levels, in order to be oriented to the ongoing modification and their accountability. This is advantageous as it would allow staff to visualize optimum scenarios, interact with real life situations, and feel these experiences emotionally. Each staff member could then be exposed to the whole journey and take extra trainings on their role. This would enhance skills in problem-solving, collaboration, and creativity. VR, AR, and MR would contribute to: upskilling staff quickly and efficiently; improving their engagement; increasing their knowledge retention; minimizing learning time, fear, and resistance to change; and, above all, retaining staff.

"To better assess the business value of innovation, executive leaders should select a combination of input, process, and output measures while the innovation program is being undertaken. Early measures will help determine whether the program is on track, as they measure activity and progress" (Panetta 2021).

New measures should be implemented to empower institutions to face the new era's challenges. To efficiently evaluate the success of the new procedures, an ongoing assessment, and flexibility to act according to the data collected and the insights reached from

processing it, would be beneficial. Leveraging staff's analytical skills would have an exemplary effect on conducting accurate data analysis, disclosing precise insights, and taking the necessary actions that matter to the whole institution and direct it to the right path in a timely manner. This would inevitably contribute in serving, supporting, and retaining students.

Also, using these skills in analyzing the data extracted, students' patterns, behaviors, interests, passion, trends, and challenges, would allow staff to accommodate the educational journey in general and take customized actions to assist each student based on each one's experience. They would then be able to offer a personalized study plan and better support the student according to their needs and challenges throughout their journey.

Furthermore, training staff to apply Emotion AI may be of great benefit. It would enable them to follow up on students' wellbeing, mental health, and other challenges and offer timely, empathetic support and communication. In addition, AI would enable staff to optimize students' potentials, accelerate their abilities and innovation, and reveal their concealed capacities. It may also allow staff to group students together according to their behaviors and interests to boost their academic and lateral thinking and social skills (whether virtually or face-to-face).

Faculty and Staff

For faculty and staff to endure all these changes and absorb all the new knowledge and skillset, they need to address their wellbeing. Stress associated with the pandemic has its repercussions, which affect mental and physical health. Self-care has become essential in these uncertain times. Guiding faculty and staff on how to embrace change while remaining calm, steadfast, and hopeful can be truly life-changing for them and, subsequently, the whole institution. It is important to assist all higher education members with work-life balance to foster personal and professional gains.

The pandemic has pushed higher education into a new territory, that of exploring ways to mitigate the effects of the coronavirus. COVID-19 might even be

considered a blessing in disguise, in such a way that it develops the opportunity to explore faculty and staff's capabilities and tap into their potential. Encouraging faculty and staff to do research would open a new forum for their involvement in decision-making and enrich existing data by providing their perspective. Finally, providing online resources, webinars, training, workshops, and new means of communication and interaction can strengthen and support networking and keep faculty and staff energized and engaged; it can also fuel motivation to create change.

Design thinking capability is defined as “a company's ability to deploy design practice to support its innovation efforts on strategic and functional levels” (de Paula 2020). Backing faculty and staff up with innovative and creative tools and processes, like design thinking, to come up with meaningful ideas that solve the problems they're encountering, would stimulate and assist them in achieving better results in a timely manner. It would also grant them the enthusiasm, courage, and confidence to explore hidden needs, collaborate together to solve problems, and create new processes and means to reach optimum goals.

The aforementioned skillset would allow the pit crew not only to manage the digital transformation and the mechanics of engaging in an online format efficiently, but also will fortify them with the tools necessary to contribute in reaching higher education optimum results through: determining whether to retire, reinvent, or rescale a program or student support system; considering the multiple factors the student must navigate as they enter the university adapt to online or post-pandemic university environments; and evaluating and devising the essential learning students must have to successfully connect and transfer university learning to career goals. Above all, it will allow them to shape, define, and innovate the new normal.

Community

Definition: people surrounding students, like parents and society members who are not affiliated to the institution or disadvantaged so that they can't attain an educational degree for any reason.

“Expanding access to quality and affordable education is a central element to eliminating extreme poverty and promoting shared prosperity” (Casanova 2020).

Many in higher education neglect the community's influence on their students. It is imperative to get community members on board in this revolutionary journey and to not leave anyone behind. Training and awareness sessions offered to the surrounding community can assist in students' progress. This could be part of the social activities that students do and part of their commitment to give back to their community. In other words, faculty, staff, students, and the community as a whole are in one boat. Diversity, equity, and inclusion is a catalyst for the betterment of educational community and beyond. Upskilling the whole community's responsiveness and adaptation means and enhancing their skills is vital. It is a mutual benefit relationship where no one is excluded or left without essential skills.

“Access to tech has greatly exacerbated gaps between socio-economic groups, whether you look at this by country, city, or drilling down to discrepancies in your neighborhood” (Wright 2021). To narrow the technological gap, higher education could offer proper training for surrounding communities. The community members could be segmented according to their needs (educational, psychological, mental, etc.). Consequently, adequate training sessions could be offered in a timely manner and in the right context—one-on-one sessions, general sessions, and workshops—based on availability of experts and resources. Training content could cover a wide range of basic to advanced topics. Basic topics might include: How do you surf the internet? What are the advantages of the new virtual era? Why is it essential for students to spend time in online sessions, and how can you support/assist them in avoiding any repercussions? Potential advanced topics could include: What are the skills needed to be acquainted with the new era, and how can you adopt these skills? How do you integrate these skills in your daily life? How could you engage with the elephant (student) in the room? How do you maintain work life balance? How do you approach the work from home or hybrid work mode challenges? How can you be a lifelong learner and join the learning arena?

The abovementioned skills are sufficient for higher education stakeholders to: manage the recovery phase; augment their vision on which path to follow and the tools needed to walk through it; and equip them with flexibility and agility required to switch between paths, if necessary.

The Pit Crew Impact

Students Competency, Success Journey, and Career Goals

Supporting student success has become more formidable and urgent than ever. In new modalities, students need continuous advice to help them psychologically and mentally handle the pressures and manage the workload. It is crucial that these tips be built on experiences and good practices from around the world. All students within an educational institution, whether degree or non-degree seeking, professional, or lifelong learners, should be assisted in developing a broad, innovative, flexible, agile, and interdisciplinary mindset to be acquainted with the new era's skillset.

Online Learning

To streamline the online journey and guarantee online learning success, the trained pit crew (academic and administrative staff) can share with the students the guidelines for successful transition to virtual classes. Furthermore, faculty should establish expectations for students who are learning online. These include: what to expect when learning in real-time; how to participate and engage in classes with instructors and colleagues; what to assume when learning at their own pace; how to upload individual and group assignments and presentations; when to expect to receive grades, grading rubrics, and deadlines; and how exams will be administered. During these challenging conditions, students need to have access to the learning materials at all times. Higher education campuses need to attain Learning Management Systems (LMS) and guide students on how to navigate these platforms. These systems facilitate student access to content, resources, and other useful materials as well as facilitate communication. This

would grant students the flexibility to set their own study schedules, learn at their own pace, and reduce their anxiety. Moreover, students need to be aware of the “academic integrity” principle, which is a commitment, even in the face of adversity, to five fundamental values: honesty, trust, fairness, respect, and responsibility (AUC 2022). Students should also be directed on how to access campus facilities like the library and writing center as well as how to receive support from IT, counseling and health centers, and any other available amenities.

Essential Learning Outcomes

In addition to course correspondence, instructor notifications, and announcements, it is important for faculty to provide tips on essential learning outcomes like time management, presenting with confidence, and teamwork. Also, offering guidance toward understanding and adopting the essential personal traits and character in the marketplace is key for the success of students' future endeavors. Finally, it is beneficial to generate workshops that advise students on how to be committed, self-motivated and proactive learners, coachable, and adaptable to a fast-changing world.

Career Outcomes

Aligning student experiences with career outcomes is an important higher education goal. According to the University of the Witwatersrand (Lukins 2021), it is believed that the following skills are essential to succeed in future careers:

- Cognitive flexibility;
- Digital literacy and computational thinking;
- Judgement and decision-making;
- Emotional and social intelligence; and
- Creative and innovative mindset.

Training students on these skills enables them to be compatible and effectively manage and fulfil the era's requirements and challenges. It would also allow them to: be adaptable and agile in acquiring new skills, change their paths, and find the best means to navigate the challenges not yet encountered. Above all, it will create a pipeline of self-reliant talents.

Connectivity

Most importantly, students need to stay connected to overcome the challenges of isolation and disconnection and to thrive. Regular communication with students via email or mobile apps is vital and engaging. The most effective communication is short and to the point in order to keep students' curiosity and attention. "We need to train scholars to deal with the challenges of the 21st century, some which we may not yet have encountered," says Professor Adam Habib, Vice-Chancellor and Principal of the University of the Witwatersrand (Lukins 2021).

Mental and Psychological Health

Furthermore, students should be allowed the chance to convey their challenges, fears, and needs; express their concerns and/or fatigue; and communicate their dreams. They need to be well informed about whom they can confide in. When the student expresses challenges, the institution's skillful, competent pit crew can immediately offer individualized study plans to satisfy and retain students, help them complete their degrees in a timely manner, see their future with a critical eye, and gain the skills and enthusiasm to keep developing themselves and learning for their entire life. These are the global citizens who will build valuable, ample, and compatible societies.

Students' Journey

Success in supporting students throughout their journey—not just in the above-mentioned aspects and the steps in Figure 3 but in any way that addresses individual student needs and their surrounding environment would contribute positively toward access and equity for all students. "[H]igher education institutions have an obligation to work toward equity for their students. Equity is grounded in the principle of fairness. In higher education, equity refers to ensuring that each student receives what they need to be successful through the intentional design of the college experience" (Achieving the Dream 2021).

It would also be advantageous to regularly assess students' satisfaction in order to determine and fix any

loopholes early on. Consistent feedback on the efficacy of the LMS, the usefulness of online platforms, and the effectiveness of procedures, regulations, and advisement would allow the pit crew to adjust and accommodate students' needs in and out of class as well as foster new creative practices. This would certainly contribute to increasing student satisfaction rates and, subsequently, positively to impacting retention.

Enrollment Management

As previously stated, in order to impact student behaviors, patterns, and trends, provide effective evaluation and monitoring, and to expand staff capacity and augment their ability in decision-making, higher education needs to:

- Upskill staff in different aspects,
- Create a data reservoir,
- Guide staff on the best means of analyzing data, and
- Use new assessment tools and Artificial Intelligence (AI).

Consequently, this allows higher education to make more reliable enrollment projections and accurately plan for course offerings, major popularity, class enrollment, credit hours' distribution, and all other "assessment building blocks" (Hassanein 2020). In addition, staff would be capable and have the autonomy to continuously evaluate and monitor applicants/students in order to offer timely recommendations, corrective actions, and practices for accommodating frequent changes. Moreover, staff would be able to revamp institutions' approaches and adjust the new tools to: plan and adopt the best means for reaching enrollment goals; identify needs; devise strategies for improvement; and work on crisis management plan/procedure to respond to the unprecedented ripple effects from the spread of coronavirus in the most efficient way possible. This would help reduce the impact on student agility, allow the adoption and implementation of new procedures and practices, and strengthen student enrollment.

Accordingly, in the model explicated below, the six enrollment management assessment phases stated by

Hassanein (2020), are influenced by upskilling the assessment, recruitment, admissions, financial, and student services teams. It would allow them to implement new practices and serve and support students through determining, evaluating, and fulfilling their needs.

The following segment illustrates the potential impact of upskilling the pit crew on the six enrollment management assessment phases, enrollment projections, recruitment, admissions, students' journey, retention, and financial support and funding opportunities.

Phase 1: Enrollment Projections

Using the data repository and the acquired analytical skills from training, the institution would have a finer visionary projection on numbers of students who are new, returning/readmitted, continuing, expected to graduate or withdrawal/take a leave of absence, and no shows. Consequently, planning would be reliable and valuable for upcoming semesters.

“Recommendations—offered after this assessment phase—enable academic programs to review their class offerings and size and to work on discipline-specific recruitment strategies and activities. The recommendations also assist in setting recruitment targets, modifying admissions cycles and targets, where necessary, and establishing discipline-specific and overall enrollment targets. They also provide graduate programs with insights regarding the necessity of developing interdisciplinary programs to increase overall enrollment” (Hassanein 2020).

Phase 2: Recruitment

Student diversity enriches graduate students' experiences and leverages their intercultural sensitivity levels (Hassanein 2020). The better the enrollment projection phase is handled, the better the recruitment is managed, and plans, targets, and objectives are set according to the following data: total number of students needed to be recruited; percentage of national vs. international students; student demographics; percentage composition of international students by nationality; percentage gender distribution; and institutions of higher education where prior degrees were earned. Higher education

may add to this data according to the nature of the institution and preset strategic goals.

Recruitment teams may also wish to engage graduate faculty in recruitment and outreach. As stated by Puckett (2021) as students are being recruited to specific programs, it tends to be more efficient and effective for faculty in each program to be involved in the recruitment and admissions process. This type of relationship marketing can be successful (Vander Schee 2010), but it is also important that a central GEM representative is available to work with program faculty to ensure that they are aware of all recruitment opportunities and follow all regulations related to recruitment and enrollment.

The recruitment team would have the awareness, vision, skills, and tools to conduct webinars for applicants to show: how the institution is managing the crisis, the various virtual and on campus opportunities, and success stories. The team would also follow up with accepted applicants to encourage them to register and matriculate as well as construct digital marketing campaigns. To compensate for the slower pace of lead generation, the team may rely more on connecting with students who indicated an interest in their institutions through niche social media apps to directly engage prospective applicants earlier in the admissions cycle.

Phase 3: Admission

“Admissions directors have long faced uphill battles in meeting institutional enrollment targets, and the past year has made it even harder to overcome these hurdles” (Farrell 2021a).

Amidst the pandemic, admissions professionals are leveraging technology in their first exclusively virtual admissions cycle, from identifying prospective applicants to persuading accepted students. The admissions team plays a vital role in managing the crisis. Along with digitalizing the admissions cycle and showing some flexibility with the deadlines, they should adopt new approaches to matriculate the accepted applicants. The admissions team would work on contacting the incomplete applicants to inform them of the possibility of completing their applications; prepare specific admissions letters for several student cases during the

pandemic; evaluate the possibility of implementing rolling admissions and offering flexible admissions waiving options; and exploring other effective admissions strategies.

Phase 4: Financial Support and Funding Opportunities

Due to COVID-19, this amenity is crucial for attracting new students and retaining continuing ones, as discussed earlier in the admissions phase. The availability of funds, will inevitably surge the admissions rates.

The upskilled staff would then have the resourcefulness and skills to navigate the current situation during and after the pandemic as the allocation of available funds requires meticulous management. The staff would expertly 1. use the available data insights to prepare a budget and detect the projected new and continuing students in need, 2. induce a fellowship/scholarship coverage plan for upcoming semesters and years, 3. accommodate the needed fellowships offering for continuing and new students with complete admissions, and 4. plan and assess the possibility of funds reallocation and emergency funds creation.

Meanwhile the fellowships team would: create an emergency fellowship application for both new and continuing students; administer external fellowships allocations on students according to their final decisions; coordinate with external donors about the possibility of assigning these allocations to other students if necessary; and review with external donors their new plans and the likelihood of changing any policies and regulations in favor of the students.

Phase 5 and 6: Students' Journey and Retention

To increase student retention rates, the team should contact continuing students to give them adequate advice and reassurance during this difficult time. Extend the study period for thesis students and/or those who were not able to graduate. Contact students who withdrew and other students who weren't enrolled to:

- Know the reason behind the withdrawal;
- Assist in solving any challenges;

- Refer to the fellowship team if needed; and
- Alert the student with remaining semesters in their study period.

Work on creating strong internal communication with programs and all institutional offices to retain students by accommodating their needs. Provide individualized advising to students, and tweak their journeys according to their needs and the challenges they face. Above all, it is necessary to lead with empathy, regularly check on student's wellbeing, listen to them, and direct them to the adequate department. Student satisfaction and retention rates would likely increase due to consistent, adequate support, accommodations, and services.

Conclusion

Higher education institutions have the societal responsibility of providing guidance to students, faculty, staff, and administration (Viebahn 2002; Bantanur, *et al.* 2015), and their decisions affect the economic, social, and environmental dimensions of the communities and regions around them (Katiliute, *et al.* 2014). In these challenging times, higher education's role is vital more than ever to fulfill the demands and needs of the new technological era.

The offered insights on Gartner's (Nielsen, LeHong, and Smith 2020) framework for the different phases and pathways the institutions have been through and are following is extremely useful in assisting higher education in utilizing pathways to shape, define, and navigate the new normal.

By higher education taking the lead and capitalizing on the advantages of the digital transformation that was imposed worldwide, a revolutionary new era would be successfully created. It is higher education's responsibility, in this new era, to maintain the social and intellectual balance and ensure the development of the communities through illuminating the three constituents of the learning arena (staff, faculty, and students) and the community as a whole.

Following the abovementioned framework of upskilling staff and faculty will enable higher education institutions to a. engage in creative strategies, b. exam-

ine, reinvent, and rescale services and programs, c. consider data to visualize the student experience, d. support students, and e. individualize their journey. This, subsequently, would create successful global citizens who are capable of learning and improving their future selves within an educational institution and beyond. These students would become professional lifelong learners committed to giving back to their communities and leaving no one behind in this technological revolution.

Above all, improving and supporting the wellbeing and mental health of faculty and staff is key for keeping up and competing in this indeterminate period and

navigating the new normal, once shaped. Finally, it is clear that higher education will spend a long time discovering the necessary skills compatible with the new era. It entails agility, flexibility, and alertness to define and set the new normal. Moreover, it demands extensive continuous research to discover how to navigate and preserve successfulness in this new normal. Alongside the community, the new era's needs, skillsets, and mindsets are indispensable to adapt to and navigate the new normal as well as to eliminate any potential barriers and to contribute in delineating, outlining, and determining the new normal.

References

- Achieving the Dream. 2021. *Achieving the Dream Equity Statement*. Silver Spring, MD: Author. Retrieved from: <[achievingthedream.org/focus-areas/equity](#)>.
- Alexander, P., and J. Fadden. 2017. A Value-Stream Mapping Success Story: MBA Recruiting Process Improvements. Paper presented at 4th International Conference on Lean Six Sigma for Higher Education, West Lafayette, Indiana, May 25–26. Available at: <[docs.lib.purdue.edu/cgi/viewcontent.cgi?article=1005&context=icls](#)>.
- American University in Cairo. 2022. *Student Online Learning Success*. New Cairo, Egypt: Author. Retrieved January 21 from: <[aucegypt.edu/academics/student-online-learning-success/old](#)>.
- AUC. See American University in Cairo.
- Bantanur, S., M. Mukherjee, and R. Shankar. 2015. Emerging dimensions of sustainability in institutes of higher education in India. *International Journal of Sustainable Built Environment*. 4(2): 323–329. Retrieved February 20 from: <[doi.org/10.1016/j.ijsbe.2015.03.004](#)>.
- Bothwell, E. 2020. Coronavirus could be 'make or break' for universities' finances. *Times Higher Education*. March 19. Retrieved from: <[timeshighereducation.com/news/coronavirus-could-be-make-or-break-universities-finances](#)>.
- Casanova, A. 2020. *IFC-Coursera Case Study: Toward Ending Educational Privilege*. Washington, D.C.: International Finance Corporation. Retrieved from: <[pages.coursera-for-business.org/rs/748-MIV-116/images/IFC-CourseraCaseStudy-May2020.pdf](#)>.
- de Paula, D., and F. Uebernickel. 2020. Mastering Design Thinking in Organizations (online course). Potsdam, Germany: Hasso Plattner Institute.
- Farrell, E. 2021a. *The First "Digital Only" Admissions Cycle (Part 1), Early Hurdles and Predictions*. Irvington, VA: Tabellini Group. Retrieved January 2 from: <[thetambellinigroup.com/the-first-digital-only-admissions-cycle](#)>.
- Gartner. 2020. *Gartner Says Security & Risk Leaders Must Balance Risk, Trust and Opportunity to Succeed in Uncertain Times*. Stamford, CT: Author. Retrieved from: <[gartner.com/en/newsroom/press-releases/2020-09-14-gartner-says-security-and-risk-leaders-must-balance-risk-trust-and-opportunity-to-succeed-in-uncertain-times](#)>.
- Hassanein, S. N. 2020. A practical framework for a data-driven graduate enrollment management plan. *SEM Quarterly*. 8(2): 19–30.
- Katiliute, E., A. Daunoriene, and J. Katkute. 2014. Communicating the sustainability issues in higher education institutions world wide webs. *Procedia Social Behavior Sciences*. 156: 106–110. Retrieved from: <[doi.org/10.1016/j.sbspro.2014.11.129](#)>.
- Lukins, S. 2021. *Future Skills You'll Need in Your Career By 2030*. London, U.K: QS Quacquarelli Symonds. Retrieved February 25 from: <[topuniversities.com/student-info/careers-advice/future-skills-youll-need-your-career-2030](#)>.
- Nielsen, T., H. LeHong, and S. Smith. 2020. *The Postpandemic Planning Framework*. Stamford, CT: Gartner. Retrieved February 10 from: <[gartner.com/en/documents/3985245/the-postpandemic-planning-framework](#)>.
- Panetta, K. 2021. *How Can An Organization Assess Innovation Success?* Stamford, CT: Gartner. Retrieved from: <[gartner.com/smarterwithgartner/how-can-an-organization-assess-innovation-success](#)>.
- Pazzanese, C. 2021. How COVID experiences will reshape the workplace. *The Harvard Gazette*. February 9. Retrieved from: <[news.harvard.edu/gazette/story/2021/02/how-covid-experiences-will-reshape-the-workplace](#)>.
- Puckett, H. 2021. Using process mapping and the "communication marathon" to increase faculty involvement in graduate student recruitment efforts. *SEM Quarterly*. 8(4): 33–45.
- QS. See QS Quacquarelli Symonds.
- QS Quacquarelli Symonds. 2020. *Your A-Z Guide to Data in Higher Education*.

- London, U.K.: Author. Available at: [<qs.com/qs-industry-reports/>](https://qs.com/qs-industry-reports/).
- Shou, W., J. Wang, P. Wu, X. Wang, and H. Chong. 2017. A cross-sector review on the use of value stream mapping. *International Journal of Production Research*. 55(13): 3906–3928. Retrieved from: doi.org/10.1080/00207543.2017.1311031.
- Vander Schee, B. 2010. The small college enrollment officer: relationship marketing at work. *Journal of Marketing for Higher Education*. 20(1): 135–143.
- Viebahn, P. 2002. An environmental management model for universities: from environmental guidelines to staff involvement. *Journal of Cleaner Production*. 10: 3–12.
- Wright, I. 2021. Is EdTech finally having its moment? *LinkedIn*. Retrieved from: [<linkedin.com/pulse/edtech-finally-having-its-moment-ian-wright/>](https://www.linkedin.com/pulse/edtech-finally-having-its-moment-ian-wright/).

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Shaimaa Hassanein is a Graduate Enrollment Management and Assessment Senior Manager at the American University in Cairo (AUC), a leading English-language, American-accredited institution of higher education and center of intellectual, social and cultural life of the Arab world. Hassanein is handling performance and monitoring, enrollment management, and assessment of graduate studies at AUC. In this role, she is responsible for developing assessment models and metrics as well as crisis management plans. She also identifies and communicates clear assessment

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Hassanein created the AUC graduate strategic enrollment management plan and oversees its implementation. Moreover, she consults higher administration on the best practices to manage student enrollment, retention, and satisfaction. She also develops models for the successful graduate student study journeys and initiates the integration of new skills and principles such as: life-long learning, design thinking, Artificial Intelligence (AI), and data literacy.

To enhance graduate program assessment, Hassanein continuously

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Hassanein holds a bachelor's degree in Accounting from the Faculty of Commerce–English section, Ain Shams University, Egypt. She is an alumna of the master's degree in applied linguistics at the American University in Cairo. She also holds a data visualization nanodegree from Udacity.