New Resource Allocation Methods for the Post-COVID World: An Interview with Prof. William MASSY

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Dr. William F. Massy, an emeritus professor and former officer of Stanford University, has been active as a teacher/researcher, consultant, and university administrator for more than forty years. After gaining tenure in Stanford’s Graduate School of Business, he served the central administration as Vice Provost for Research, Acting Provost, and Vice President for Business and Finance—during which time he developed and pioneered financial planning and management tools that have become standard in the field—and then as Professor of Higher Education working on resource allocation, cost containment, and academic quality assurance and improvement. He co-directed the Department of Education’s National Center for Postsecondary Improvement from 1996 to 2002, served on Hong Kong’s University Grants Committee from 1991 to 2003, and since 2010 has been an Honorary Faculty Fellow at the University of Melbourne (AU).

Dr. Massy most recent books are *Resource Management for Colleges and Reengineering the University: How to Be Mission Centered, Market Smart, and Margin Conscious* (Johns Hopkins University Press, 2020 and 2016). He holds a Ph.D. in economics and MS in management from the Massachusetts Institute of Technology, and a BS from Yale University.

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We experience non-stop changes throughout the world and the most recent COVID-19 crisis confirmed, once again, that in most cases our previously ratified policies, rules and regulations failed to meet the governments’ needs to confront with the challenges. In the same vein, our people witnessed numerous burdens over the years due to the governments’ failures to modify the outdated policies and decisions in different spheres of economy, education, foreign policy, and health.

William Massy: It is a pleasure to speak with readers of the “Journal of Higher Education and Leadership Studies.” I will concentrate on the first question, below, because that is my primary area of expertise. I was pleased to hear that my 1996 book, Resource Allocation in Higher Education, is still being cited. Three of my more recent books (Honoring the Trust, 2003; Reengineering the University, 2016, and Resource Management for Colleges and Universities, 2020) also are relevant to my responses. Citations and short descriptions can be found on my website:

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Resource Allocation in Higher Education (1996) is still cited globally by those who care about the economy of higher education; however, it would be great if you could help us identify the following:

Question: What is/ are the difference(s) between three decades of 1990s-2020s in terms of Resource Allocation in Higher Education?

Answer: For the most part this has been an era one might call “pre-transitional.” The golden age of universities had ended during the 1970s and the 1980s were consumed by efforts to regain financial sustainability while coming to grips with huge changes in society and technology. Higher education markets in the West became more competitive, and the tilt of student and government interest toward the teaching of skills and abilities rather than traditional academic subjects encouraged the proliferation of small and specialized programs. Digital technology and the Internet revolutionized the development of teaching methods.

All this put increasing pressure on costs, just as problems on the revenue side became more challenging. Some universities thrived and others weakened, but the lives of faculty and administrators in most institutions became more frenetic. The metaphor of the ivory tower became less and less apt. The pressures on cost and revenue called out for the reengineering of resource allocation and management processes, but fear of change, inattention by leaders, resistance to adopting the emergent new tools, and simple inertia limited the scope of reform. The lack of urgency ended abruptly with the onset of COVID-19, as schools scrambled to close huge budget gaps and attain financial sustainability under the dramatically new conditions. The questions now are how many institutions will survive, and how many of the survivors will be succeed in preserving their core academic values and quality.
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Question: How do you portray the changes in terms of the prevalent trends and dialogue in Resource Allocation in Higher Education over the two decades?

Answer: The pressures on cost and revenue caused universities to become better at squeezing their budgets. What they did not do enough of was aligning their internal processes with the new economic environment. Too often, for example, coping with budget cuts meant boosting faculty/staff workloads, bringing in lower-cost and less-competent personnel, and cutting important out-of-class services to students. This allowed the university to do more with less, but it did so on thebacks of faculty, staff and students rather than by increasing their productivity. I call this a pre-transitional era because the unsustainable responses to financial stringency were producing an increasingly unstable situation—one that, now, has been brought to a head by COVID-19.

The trend toward decentralization of resource allocation, which has continued since 1996 in large and medium sized universities, has helped with the alignment problem but failed to solve it completely. The so-called “Responsibility Center Management” (RCM) schemes, which decentralize both revenues and expenditures, are most common. Their incentives pull in the right direction, but they are not strong enough to overcome the resistance to restructuring. Value Responsibility Management (a.k.a. block budgeting) decentralized only expenditures—the idea being that central administrators could use the leverage of revenue allocation to negotiate productivity improvements without trying to micromanage the details. However, it has not caught on as I expected due to the lack of urgency noted above and the difficulty of actually effecting the needed alignment. The new academic resourcing models described below appear to solve the “how” problem, and of course COVID-19 has stepped up the urgency.

The new models allow decision makers to understand their teaching activities, and the costs, revenues, and margins (i.e., surpluses or deficits) associated with them, at much more detailed levels than was possible previously. They can determine which programs, courses and departments make money and which lose money. (The model does not depend on the existence of student tuition payments; government allocations based on student enrollments work just as well.) This is not a capitalistic concept. The economic theory of not-for-profit enterprises, which applies to Persian universities just as to those in the West, explains that money-making activities cross-subsidize those that lose money. Hence, the university can create more overall value when it understands the economic consequences as well as the importance of proposed actions. I describe this theory in all three of the aforementioned books, most recently in Chapter 6 of Resource Management for Colleges and Universities. My current research refines the above by developing methods for assessing the relative non-monetary importance of relevant action alternatives.

Question: In terms of Resource Allocation, what do you suggest to optimize the universities’ outputs in the current era?

Answer: Optimization of outputs depends, first and foremost, in getting the right mix of degree and other academic programs. As described above, this means balancing the intrinsic importance of programs with the margins they earn given their cost in relation to current tuition rates and/or government appropriations. Deciding which programs to grow, shrink, sustain, or sunset means balancing their direct importance with the indirect benefits of earning positive margins. As noted, the new academic resourcing models promise to revolutionize the output optimization problem.
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Their level of detail makes it possible to analyze both the operational and financial sustainability of proposed program configurations. This, in turn, drives conversations about the trade-offs needed to optimize outputs for whatever situation the university faces.

Course proliferation is another optimization element that should be addressed. It may be something of a truism to say that programs drive revenues while courses drive cost, but it is a truism worth remembering. Departmental course offerings should be driven by the curricular requirements of the programs being served, plus a reasonable degree of discretion to reflect specialized student and faculty interests. Unfortunately, the linkages between program curricula and departmental courses are relatively weak and the discretionary component has been allowed to proliferate without sufficient regard to the economic consequences. (There is growing evidence that course proliferation does in fact boost faculty workloads to unsustainable levels.) “Curricular efficiency improvement” requires tighter linkages between program curricula and course offerings, and the pruning of small, unimportant, and money-losing courses.

Two additional optimization elements need to be mentioned. First comes the process of choosing among funding requests in the university’s annual or biannual budget cycle. The requests can be very difficult to compare and there are many more than can be afforded. The “apples and oranges” nature of the comparisons, plus the fact that there is a binding budget limit, makes this a difficult analytical problem. I describe my research on it in Chapter 8 of Resource Management.

The final optimization element relates to the quality of academic provision. Insufficient consideration invites a race to the bottom in terms of quality as universities cut costs in order to boost efficiency. Difficulties arise due to the notorious difficulty of measuring teaching and learning quality in universities. Departments and individual faculty may recognize quality when they see it, but that doesn’t necessarily bring it into the optimization process. I believe the answer lies in periodically assessing departments’ quality assurance and improvement processes — and then negotiating enhancements if necessary. If done well, this will put a floor under permissible cost cutting and, thus, arrest the race to the bottom. For more on this subject, see Chapter 7 of Resource Management and the references cited there.

Question: Who are the key actors in the realm of economy of higher education?

Answer: Some commentators answer this question by pointing to government policymakers and funding bodies, but I believe the key actors live within the university: particularly, the academic and administrative leadership and the faculty. Increased funding always will improve the university’s economic situation. This should be promoted wherever possible, but the reengineering needed to align activities with realized resource availability can only be done within the institution.

The faculty’s role is particularly important, although this is not always recognized. Professors are the only actors with the disciplinary knowledge needed to make fine-structure trade-offs among academic activities, economics and margins, but they generally are not tasked with doing so. Experience with the new academic resourcing models demonstrates that faculty can and will make these trade-offs if they are empowered and given the right tools. They soon learn that leaving the economic decisions to administrators and financial analysts virtually guarantees that academic knowledge and values will get short-changed. This will hurt their students, reduce their research output, and put pressure on their workloads and quality of life. I’m convinced that the new academic
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resourcing models provide the necessary and sufficient conditions for improved faculty involvement—providing, of course, that the university’s leadership embraces the models in the first place.

Is it true that the educational policies throughout the K-12 and Higher Education are complementary? In this case, what happens in the primary years of education provide the input for the secondary schools and the same happens for high school and university studies! In terms of “Productivity in Post-secondary Education”:

**Question:** How do you clarify the dynamic relationship between Primary Schools, High Schools, and Universities?

**Answer:** Universities should establish closer links with high schools in their areas. This is not an area where I have any particular expertise, but I would say the establishment and maintenance of such linkages should be included as a dimension of academic quality and monitored accordingly.

**Question:** If we consider graduates from each educational cycle as the input for the next cycle; What are the key factors for success in each of these educational cycles?

**Answer:** Certain universities across the world already regard departmental understanding of employment needs and opportunities for their students as element of academic quality. Their numbers should be expanded. Among other things, consultation with employers should be viewed as an important step in the design of program curricula.

**Question:** What do you think about the current status of employability opportunities outside the academia for the schools and universities’ graduates? What are the challenges for graduates, university governing bodies, industries, and the governments? What do you think about the role of “Curriculum” in this case?

**Answer:** The cumulative improvement of graduates may well hinge on the academy’s ability improve teaching and learning, particularly through greater student engagement. The sector’s track record on this is not as good as it should be, but work related to digitalization during the past decade offers the promise of significant breakthroughs. This new frontier may prove crucial for universities’ ability to help solve societal problems.
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Question: How do you analyze traditional university through critical and comparative stands? Can we use the concept of modern university as the other side of the higher education progress continuum? If yes, what reengineering practices our universities experienced to change from tradition to modernity? What do we learn from a comparative analysis of traditional and modern universities in terms of efficiency and continuous improvements?

Answer: My discussion of output optimization addresses this question, to the extent I understand it. I believe the transition from tradition to modernity runs through the integration of academic values with economics and the broader view of quality that I mentioned earlier.

Question: As you surly know, the impacts of Covid-19 on some initiatives such as academic mobility, internationalization at home, and cross-border research and education have been enormously troublesome and disruptive. How can and will internationalization adapt to help shape some creative policies in academia?

Answer: COVID-19 certainly has exacerbated existing political concerns about cross-border research, education, and intellectual property. I feel strongly that higher education should be international in scope and that faculty, students, and ideas should able to interact freely.

Question: The Commodification and commercialization of higher education has been taking place all over the academic spheres. How do you think it can and will shape the higher education policies and leaderships?

Answer: Commodification and commercialization threaten core academic values. They arise when markets and other economic considerations are allowed to dominate decision making in universities. I hope the trend can be reversed and believe that not-for-profit decision-making using the tools described above will succeed in accomplishing that.

Question: What are the main components of university social responsibilities in the era of Covid-19? What are the qualities of a successful professor in this period?

Answer: I would say that social responsibilities in the COVID-19 era are no different than they were in previous areas: namely the provision of effective teaching and learning, knowledge creation, and public service as specified in the institution’s charter. The new resource constraints will require universities to reengineer some of their resource allocation and management processes but, in doing so, the sector must not forget that these responsibilities lie at the core of its mission. Reengineering will require professors to rethink the way they approach academic resourcing, and also identify more strongly with their institutions as well as their academic disciplines. As noted, they...
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should be willing to tackle the knotty questions of balancing academic importance with economics, and also developing and applying new methods for teaching and the measurement of learning. Universities represent the greatest concentrations of smart and dedicated people to be found in many countries. Unfortunately, although their views about the external world may well be forward-looking and change-oriented, the views about their own institutions often are insular and conservative. That must change if higher education is to adapt to the post-COVID era while retaining its core academic values.

And as a final word:

**Question:** What is your analysis of the higher education based on the former achievements and future horizon? In different eras, we have both pros and cons of higher education! As a globally recognized university scholar and leader, please let us know that: What are the key positive points and negative issues which pros and cons of Higher Education raise in their analyses of the universities within two recent decades?

**Answer:** I believe I covered these points in my previous answers.