

In May 2015, the Board of Regents of the University System of Maryland authorized the University of Maryland University College to institute a new business model. The purpose of that step was to enable UMUC to achieve the organizational and operational flexibility needed to be an effective competitor in the rapidly changing environment of online education. The details of that new business model were outlined in a White Paper that was incorporated into the Board of Regent's formal approval.

Even as UMUC is moving ahead with the process of implementing the new business model, a process that will continue and evolve over time, the University's academic leadership and core faculty are beginning to formulate the specific details of the academic enterprise that will be enabled as the result of the new business model.

To put that point succinctly, the organizational and operational changes are the means to building "a university of the future" that:

- can respond quickly and without lengthy bureaucratic delays to new workforce needs
- is student-centric,
- is focused on competency-based outcomes rather than hours in a classroom,
- is responsive to and in partnership with the needs of business and employers,
- uses educational metrics to drive key decisions, and
- is competitive in both the national and international education marketplace.

The purpose of this White Paper is to provide to the Board of Regents an overview of the evolving academic model at UMUC.

Two caveats are important to include. First, academics at UMUC will always be a work in progress that fosters new initiatives building upon what is successful as well as on emerging needs. What we present here is a starting vision, not the final product.

Second, UMUC is positioned to undertake this bold effort because it has always been a non-traditional institution, more tied to the needs of students and of the economy than to an educational model that has been best suited for full-time students coming directly from high school.

UMUC Today

UMUC is already unique within the University System of Maryland. While its academic programs are numerous, diverse, of high quality, and academically rigorous, it bears little other resemblance to a traditional university: its students are not young, it has no dormitories, or football team. Moreover, it has been engaged in a process of rapid transformation over the past two decades that has served to further distinguish it from other public institutions in the State.

Some of the differences are familiar to you. UMUC has always focused on adult learners who are usually older than traditional college age students, have competing priorities including work and family, and require different support systems than students on a residential campus.

Another attribute of the university is its widely dispersed student body. Starting with educational offerings for the military in Asia and Europe in the 1940s, UMUC has always been more than just a Maryland institution. With the rapid explosion of online courses, UMUC now is among the largest universities in the world and competes in a field where change is constant.

In FY 2014 UMUC enrolled approximately 85,000 students worldwide. Of these, 87 percent took at least one course online; UMUC had more than 243,000 online course enrollments and offered 981 distinct courses online. In fact, the vast majority of students worldwide complete their degrees predominantly online.

Currently, UMUC offers over 70 undergraduate and graduate degree and certificate programs. Every program can be completed online, with the exception of the Doctor of Management program, which has weekend residency requirements. Due to increasing student demand for learning online, no program is now offered entirely onsite.

These characteristics of the present day institution have led to distinctive approaches in:

- Its programmatic offerings,
- The role of faculty at UMUC,
- The focus on technology-enhanced learning, and
- Reliance on data-driven decision making.

These attributes form the foundation on which UMUC expects to continue evolving its academic model in response to an international education market that will change in ways and whose future shape no one can accurately predict today.

In the following sections, the White Paper first describes the current configuration of each of the elements referred to in the preceding paragraph. Then,

the likely next stages are presented with the recognition that change will be continuous.

Finally, a concluding section discusses a range of potential new ventures that go beyond the current boundaries of what we now know as UMUC. The central goal of this entire enterprise is to create and continuously adapt an educational institution that provides high quality education to a growing market of students in Maryland, the nation, and the world.

Academic Programs at UMUC

From a starting point of adult students taking most of their courses online, the nature of academic programs—their development, focus, learning assumptions and relationship to the world of work—is different at UMUC than at most traditional universities.

The degree program is the basic building block of academics rather than the individual course. That relatively simple statement is in fact a radical idea within contemporary higher education. The primary focus in creating any particular academic degree—and it may be easier to think first of graduate programs—is to identify the learning objectives and skills that are the intended outcomes for a student taking the program.

Using that premise, every course as well as the sequence of courses is tied to the learning objectives. Learning by doing, and doing repeatedly, will be built into each program through the inclusion of certain skills in multiple courses. *The goal is to ensure that every graduate of the program has mastered a set of competencies that are viewed as critical to the particular field.*

Utilizing data that is generated by online courses, it is possible to determine whether a student has mastered a skill in class 3 that is essential for moving to a more advanced level in class 5. Ultimately, the logic of this approach may lead to evaluations of student progress that are based on their ability to master particular competencies rather than by the amount of time they spend in class.

To make this system work, it's important that each section of a course provide the same material as every other section. As a result, UMUC is moving to a standardization of curriculum, educational materials, and syllabi. There is a centralized course development process, which allows instructors to then focus on student learning. This point is described more fully in the section on faculty.

A recent innovation that is now being fully implemented is the use of open educational resources rather than standard textbooks. Besides saving students the considerable expenses incurred, this approach allows the most current materials to be available for each class. The class is no longer defined by the textbook, but instead uses educational resources to support the learning objectives.

The curricular challenge for UMUC is a bit different for undergraduate programs than it is for graduate degrees. In the first place, almost all of UMUC's students come with some prior learning, including but not limited to college courses. As the university more fully adopts a competency model, prior work and life experience, systematically and rigorously evaluated, will be part of a student's pathway to an undergraduate degree.

As with graduate programs, the objective of identifying and incorporating clear learning objectives and relevant skills is also a part of the undergraduate education model. Regardless of a student's prior college experience, the specific courses that constitute a major and the sequence of those courses is carefully structured to ensure that the student achieves the competencies needed in the field.

One important step that the university has recently taken has been to dramatically streamline undergraduate degree pathways. There is a growing concern in higher education that the almost unlimited and unrelated panoply of courses available in most universities results in undergraduate degrees with little coherence or core knowledge. Too many courses are stand-alone outliers, taught primarily because they reflect the interest of one faculty member.

Within the number of credits that a student transferring to UMUC needs to fulfill the requirements for an undergraduate degree, there is a focus on competency, learning by doing, and specific skills. To reiterate a key point, most UMUC students already have work experience and are looking to augment the knowledge and skills for future employment and careers.

An important disclaimer is in order at this point. For some readers, the prior discussion may sound like a description of career or vocational education. That's a false dichotomy. The same fundamental skills—analyzing, writing, organizing, communication, critical thinking—are at the heart of a liberal arts education as are required to be successful in the work place.

Indeed, employers frequently comment that college graduates, regardless of their major, often lack these fundamental skills. *We are committed at UMUC to ensuring that all students entering the world of work have the ability to succeed in both their career and their day-to-day lives. Being able to function as well-informed and thoughtful citizens is no less important than the other areas of their lives.*

Two final points will get additional attention in subsequent sections. *First, the development of new programs and the modification of existing ones are heavily influenced by ongoing interaction with employers and businesses.* Understanding the competencies and skills that are necessary for success in any particular field as well as being able to identify emerging fields is critical if UMUC is to be a leader in the educational market. To cite a contemporary example, spring 2016 courses in cyber-

security will use the hacking of the Office of Personnel Management's web site as a case study.

Higher education is in many ways a highly regulated market. There are numerous rules and procedures that must be followed before a new program can be offered. That model is out of date, even anachronistic. We live in a global economy where borders are not nearly as important as they once were. Competitors are not merely within the state or even the nation.

UMUC's ability to respond to the workforce needs of a rapidly changing environment will require the ability to bring new academic programs to the market in real time, not bureaucratic time. That's a challenge for the future, but that future is now.

The Role of Faculty

Few aspects of UMUC are more misunderstood than the role of faculty. That problem results from the fact that the faculty model at UMUC is fundamentally different than that at traditional universities. Most observers know and have experienced the traditional model and generally see it as the "correct" one.

Let's start with a fact that is widely known about UMUC's faculty. The overwhelming proportion of adjuncts who teach for UMUC are working professionals in their fields. *Following UMUC's long-time model of employing scholar-practitioners – highly skilled professionals working in their field who wish to shape the next generation of professionals through teaching – most courses are taught by adjunct faculty members teaching one to two sections per term.* Their real world experience is what they bring to a UMUC classroom. Most do not rely on employment at UMUC as their primary source of family income or their access to benefits.

The heavy reliance on adjuncts is one factor that has allowed UMUC to grow dramatically as well as to offer courses all over the world to the United States military. But UMUC's adjuncts are on the whole different than the adjuncts that you read about in articles in the Chronicle of Higher Education that highlight their difficult working conditions.

It is not uncommon at UMUC to offer dozens of sections of the same course in the same term. Were each adjunct faculty member to develop that content individually, the variation from student to student on what was learned would be too high. *Moving towards the standardization and uniformity of course materials and outlines ensures that every course sets its students up for success in the rest of their program.* Where our scholar-practitioner adjunct faculty members can and do bring incredible value is in the facilitation of the course, helping students to connect learning to the profession, bringing in real-world examples and currency.

Every institution has a culture, and for any employee – faculty or staff – to be happy and thrive, that culture must be a good fit. The mission, vision and values must resonate. UMUC has not always been as explicit as it might be in this area, in particular with respect to new faculty hiring, screening and training, and there will be continued evolution. UMUC has taken some important steps, however. The adjunct faculty job description is now standardized across the university, and it lays out the qualitative expectations we have for effective teaching. Further, there is a new faculty-training course, steeped in what we know about how learners learn, in particular adult and military learners, that is required of all individuals who teach for UMUC.

As new programs are developed and new markets are explored, the process of recruiting and assessing new adjuncts will become more rigorous. For example, there will be clear expectations about competencies in the use of technology that have not always been in place. Similarly, making sure that new adjuncts fully understand UMUC students and how they differ from traditional college students will receive greater emphasis.

Monitoring and evaluation of a large cohort of adjuncts is obviously a challenge, but one that has received a lot of attention. Program chairs conduct online classroom observations as one method of evaluation. A new standard format has just been developed that should ensure greater uniformity in that process.

Additionally, however, online classes generate a wealth of useful data, some of which can be used to determine real time whether a faculty member is helping students succeed in the classes he or she teaches. UMUC is a national leader in the use of data analytics and this piece will become even more important over time.

The core faculty, the program chairs and twelve-month teaching collegiate faculty, are responsible for taking the lead in curriculum development, interaction with employers about curriculum, oversight of adjuncts, and interaction with university administrators on the overall direction of UMUC. UMUC faculty do not have the same research expectations of them that many traditional university faculty do, but they all have major and important leadership responsibilities.

This section would not be complete without a discussion of the teaching model that is evolving at UMUC, one that applies to both full-time faculty and adjuncts. With the emphasis on acquiring specific competencies related to a particular degree program and with students who are mostly working adults, a traditional model of teachers as predominately transmitters of information doesn't work well. In fact, there is an ongoing conversation in higher education as a whole about the evolving role of faculty, but this discussion will limit itself to UMUC faculty.

Rather than lecturing or providing the online version of a lecture, the expectation is that faculty will serve as mentors or guides to students in their classes. There has been discussion for years in higher education about moving away

from the “sage on the stage” approach to teaching. At UMUC, we have been steadily and systematically moving in that direction. At UMUC, with its emphasis on working students acquiring professional skills and with faculty who are practitioners in their fields, the mentor model seems particularly appropriate. Making it clear to future faculty hires that they are expected to be mentors rather than sages will help bring about a transformation. Training and mentoring for faculty will also help change the teaching model.

All of this really is a work in progress. The approach to teaching described in this section is an essential part of the overall educational model that UMUC is in the process of creating. Some of it is already in place, but the model will continue to evolve over time.

Technology and Learning

UMUC is already well known as a leading online university. The fact that many of its students take their courses through the Internet rather than in a classroom is really just the tip of the technology iceberg.

Two of the most familiar aspects of higher education take a totally different form at UMUC than was the case for anyone who attended college before the digital age.

First, UMUC does not have a library in the traditional sense that most people use that term. No stacks, no card catalog, no multi-floor building. *Instead, UMUC's library is entirely online and its full array of resources is available to anyone regardless of where they are in the world.* Books, periodicals, government documents, business reports and just about anything else you can think of can be accessed by a student through her or his computer.

The digital library provides more materials more readily than any traditional library. The collection continues to expand and the types of materials that will be available in the future have no obvious limit. Not subject to time or distance constraints, UMUC's library enables students to conduct research, examine primary documents, and access rare materials in a way that was never possible in a traditional university library.

At UMUC librarians support learning design and development by finding learning resources for program chairs who can then use them as part of the program and courses. They also are involved in the ongoing search for high quality open educational resources.

This exciting resource does require learning a new set of search and research skills, but students are exposed to those skills throughout their academic program at UMUC. The skills in turn become a critical asset in lifelong learning whether at UMUC or after graduation.

In addition, UMUC is moving toward final stage of a plan to totally eliminate the use of publisher textbooks and to instead provide all students in all courses with access to open-source learning materials at no cost to students. While this is certainly a revolutionary breakthrough, it is also a logical extension of online education.

There is been a major debate in recent years about the high cost of college textbooks. Various states, including Maryland, have attempted by public policy to put limits on the costs or at least to ensure that the lowest cost option was made available to students. These efforts have for the most part had only a marginal impact on the cost to students.

UMUC's initiative will totally eliminate all textbook costs to the student. Through a combination of open access materials, subscription items that UMUC pays the cost of for all students, and searchable databases, traditional textbooks will become obsolete.

In 2015, UMUC received the President's Award from the Open Education Consortium for this initiative. This achievement is an additional external validation of the university's leadership in online education.

In addition to cost savings, there are at least two significant educational benefits. First, class materials will be much more up to date as a result of this change. The production process for textbooks means that they are at least a year or two out of date by the time they are available to a student. Real time materials will be the norm in this new system.

Second, classes can be organized around the learning objectives rather than around the structure of a textbook. UMUC's course development process, with teams working to plan a course and identify the appropriate materials, allows a comprehensive approach to the learning objectives.

Moreover, with all instructors using the same materials for any particular course, students are ensured a common educational experience. This contrasts with the situation in many institutions where each faculty member individually writes the course outline and selects the textbooks to be used in that section.

As important as these steps are, the digital library and the online course materials are, in the end, merely the supporting structure for any course.

Online education over the years has seen the development and revision of a number of Learning Management Systems (LMS) that form the architecture for an online class.

UMUC for a number of years had its own proprietary system known as WebTycho. These systems allow an instructor to embed assignments, discussion

forums, supporting materials, and evaluation procedures into a class in an online format accessible to students. In 2013 – 2014, it moved to a new LMS with similar functionality.

The sophistication and functionality of LMS platforms has continued to evolve and is now at a new stage. In its earlier iterations, most of these learning platforms replicated a traditional classroom in an online format. That's no longer the case.

With more tools available—multi-media, adaptive learning mechanisms, feedback devices, and data collection systems—the next generation of online courses is likely to move beyond anything that has been available in an LMS.

UMUC is working with other institutions and exploring the latest trends in online learning systems. UMUC's goal is an intuitive, seamless user interface, where numerous functions are interconnected in a way that is totally invisible to the viewer. The next version of the digital user experience will be personalized to each student—rather than a standardized one-size-fits all model.

For the student, what will be important is that online classes will have more tools, more resources, and more interactive features. For the instructor, there will be more options in terms of working individually with students, monitoring and evaluating their progress, providing personalized feedback, and having a rich array of data to assess in terms of both the student and the course.

Data-driven decision-making

Online classes, if properly designed, generate enormous amounts of data about student learning. That phenomenon has resulted in the growing field of data analytics in which UMUC is both a leader and a pioneer.

While all aspects of data analytics have potential importance, the single most important area is the ability to provide tools to assess and intervene in a student's educational experience. UMUC has already identified key indicators that are present in the first few days of a student's initial class as predictors of success in a program.

With the overriding philosophy of wanting to help students succeed rather than fail to progress, this early "marker" may suggest skills that a student needs to acquire before continuing in the program. Additional assistance by the faculty member on a personalized basis may be required.

With the design of academic programs involving each phase building on the mastery of preceding materials, early identification can prevent a student from getting to the fourth or fifth class in a program without the skills to be successful.

In the same manner, a faculty member is able to track the progress of any student not merely in terms of the completion of a series of assignments, but instead of the mastery of the necessary skills. This tool has the potential, as it is more fully developed and as faculty become more proficient in its use, to significantly increase the completion and success rate for students.

A similar insight can be obtained with respect to the effectiveness of instruction. Given the standard approach to multiple sections of any class, it is also possible to evaluate whether students in different sections are succeeding at the same rate. This perspective can help determine whether there is something in the approach that a particular faculty member brings to the class that increases the learning of students relative to those in other classes.

This category of data can be an important tool for a program chair in evaluating faculty and in providing feedback on how to be more effective.

There is, in addition, another layer to the impact of data analytics on assessment. With programs and classes aligned to employer expectations about the acquisition of competencies most important to a specific field, a macro-analysis of, for example, a program in accounting can determine whether the graduates of that program are obtaining the desired outcomes.

While this White Paper is focused on UMUC's academic programs, the use of sophisticated data actually characterizes decision-making in a range of administrative areas as well. As an institution with relatively little state budget support, UMUC has had to make effective and efficient use of all of its resources. For example, even though the decision was driven by an academic objective, the significant reduction of the number of undergraduate courses also had a direct impact on the utilization of faculty and on the university's efficiency, allowing us to focus our efforts and resources in a more targeted manner.

Another example is familiar to the Board of Regents. Two years ago, UMUC encountered an unexpected drop in enrollments. In response, the University's leadership analyzed the use of marketing and recruitment dollars, made decisions about strategic reallocation, and ended up reversing the enrollment decline while actually spending less for marketing.

All universities have institutional research offices that track major trends and try to anticipate where corrective actions may be necessary. UMUC in many respects lives on data and has developed a culture that places it at the center of decision-making.

Moving into the future

This White Paper has described a university in transition, albeit a transition that won't have an end point. The evolving UMUC is built on a long tradition of

serving working adults wherever they happen to be. The university was one of the first to see and implement the educational potential offered by the digital age.

What everyone now understands about technology, and every enterprise that is based on technology, is that it never stands still. Being a leader today provides no guarantee about your standing tomorrow.

From that perspective, the single most important feature of UMUC is that it embodies a culture of innovation and change. To be a successful competitor in the world of online education, UMUC will not only have to follow through on all the efforts that have been described in this White Paper, but will also have to continue innovating, never get locked too far into any approach, and take risks that won't always be successful.

Some of the initiatives described in the White Paper are very far along, such as the transition to open learning resources rather than textbooks. The effort to stay current with the needs of the economy is an ongoing process that never stops. The adaptation of teaching to a mentor model has begun, but has lots of work ahead of it.

The very premise of this White Paper is that we can't be too sure what the future holds. We can however anticipate some areas in which UMUC is likely to be active.

The university's history started with continuing education students in Maryland, expanded to serving the military in Asia and Europe, and then moved into the world of online education. The latter area is one in which there is significant potential for expansion to new markets.

Can UMUC take its reputation and brand into other parts of the United States and into international settings? Online technology certainly makes that possible, but there are lots of challenges before success can be achieved in new locations. There are, of course, competitor institutions, some of them quite well known and already established. Can UMUC offer a competitively priced quality education and win a share of some of those markets?

Are there legal or regulatory barriers to overcome? Are there culture issues that need to be taken into account? Are there academic fields that UMUC does not offer currently that could be attractive in some of those markets?

These are among the issues that UMUC faces as it endeavors to be a leading provider of online education on a national and international scale.

But there are other ventures that may be on the horizon as well. An area in which UMUC has already had some success is in establishing partnerships with

businesses and with government. The opportunities for customized programs—whether closed site or open to multiple clients—will continue to be explored.

Partnerships with other educational institutions could also be in the offing. Those relationships could take many forms. For example, UMUC might well be the platform and facilitator for other USM institutions to offer their degree programs online. Many are in relatively early stages of development and could save both development costs and learning curves by partnering with UMUC.

Growth in some fields occurs as the result of one business acquiring another. UMUC's new business model opens that avenue as a possibility in the future, as well.

When the Board of Regents approved UMUC's new business model last spring, it gave UMUC the tools and flexibility to greatly expand its educational horizon. This White Paper has described not only what the university has achieved up to now, but has also outlined the near term future. What the White Paper cannot do, and what is even more exciting, is imagining those initiatives that are just beyond the horizon.