INCORPORATING DIGITAL FLUENCY AT UMW

A Report from the Digital Fluency Working Group March 2017





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Executive Summary

The UMW Strategic Plan 2020 boldly advances a vision for the University of Mary Washington to be a leader in the Digital Liberal Arts, in no small part by incorporating **advanced digital fluency** into the curriculum (Goal 1.2.1). The Working Group defines advanced digital fluency as: the ability to consume and produce digital knowledge critically, ethically, and responsibly, as well as creatively adapt to emerging technology.

The literature states the most effective way to help students achieve these goals is to take a fully **integrative approach** to incorporating it into the curriculum; beyond simply an add-on, digital fluency must be incorporated into the student's overall educational experience at UMW. This approach would place UMW in a unique and forward-thinking position, as most efforts thus far on campuses to incorporate digital fluency have been either as add-ons (institutes, centers, small

Goal 1.2.1: Incorporate digital fluency in the curriculum, either as part of general education or by enhancing the digital content within major programs. The Teaching, Technology, and Innovation division will design a plan in AY 2016-17 to guide this conversation.

pilot initiatives) or localized in specific programs and departments. We strongly recommend taking a phased approach to fully integrating advanced digital fluency across the campus, starting with integrating the concept into the FSEM, and then creating a series of "Digitally Intensive" courses. Simultaneously, departments and programs would be invited to examine how their programs could integrate their disciplinary form of digital fluency into their curriculum, building on what they are already doing academically. Support for these initiatives would come from Teaching, Technology, and Innovation unit, in the form of faculty development, consultation, and facilitation.

Introduction

In May 2008, an ad-hoc Provost's Committee on Digital Initiatives put forward a report and series of recommendations on the future digital direction of UMW. In it, the Committee addressed the question: "Are we prepared to educate and challenge bright, creative, and ambitious students who will be coming to us, increasingly, having already experienced the power that technology has to transform their lives, extend their intellect, and connect them with like-minded learners?"¹ They came up with a number of recommendations, which, through their implementation, ten years later, have put UMW at the forefront of the Digital Liberal Arts. This includes the creation of a position for a digital resources librarian and the President's Technology Advisory Board.

Our mission at UMW is to provide "a superior education that inspires and enables our students to make positive changes in the world." Our established history and reputation as one of the leaders in the Digital Liberal Arts has equipped us to continue to fulfill this mission through the integration of advanced digital fluency for our students. This move would not only fulfill our mission, but also equip students with sought-after skills for the job market and beyond.

The work has been further reinforced by a number of larger and smaller-scale projects; the Division of Teaching and Learning Technologies (DTLT) and the Center for Teaching Excellence & Innovation (CTE&I), under the umbrella of the Teaching, Technology, and Innovation (TTI) unit, have offered an evolving variety of faculty development opportunities. This has led to an increased number of faculty and departments integrating digital tools and techniques into their classrooms and broader curriculum, further evidenced by the increasing usage by students of the recently created Digital Knowledge Center (DKC). The UMW Libraries have incorporated aspects of digital fluency into their information literacy instruction, and have recently created two new spaces for digital production: the ThinkLab maker space, and the Digital Archiving Lab. There are currently over 10,000 sites through UMW Blogs and 2500 UMW faculty, staff, and student domains registered through the Domain of One's Own project. The recent opening of the Hurley Convergence Center created a physical hub for the campus community to have greater access to a variety of digital tools and resources.

Nevertheless, the same central, driving question still remains: Are we prepared to educate and challenge bright, creative, and ambitious students who will be coming to us? But other questions

emerged as this Working Group discussed and prepared this report: Can we attract these students? Can we retain them? Are we adequately preparing our students for a life and career in this increasingly digitally integrated world? Put differently by Randy Bass and Bret Eynon in their recent report for the American Association of Colleges & Universities (AAC&U), "Who do we want to become? What kinds of institutions should we be in the future? What kinds of graduates should we be producing?"²

These same questions, outlined by President Troy Paino in his January 2017 All-University Opening Assembly,³ are even more urgent for us at UMW. As he stated in his remarks, "we have a wonderful tradition, but we have an even greater responsibility moving forward." These challenges include the shifting nature of citizenship in the 21st Century, as well as the diminishing state funding for post-secondary education. President Paino calls for us to adapt "a liberal education to a digital universe" in the service of making us both distinctive and preserving our leadership role in this area.

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Are we prepared to educate and challenge bright, creative, and ambitious students who will be coming to us? But other questions emerged as this Working Group discussed and prepared this report: Can we attract these students? Can we retain them? Are we adequately preparing our students for a life and career in this increasingly digitally integrated world?

Advanced Digital Fluency - A Discussion

The UMW Strategic Plan 2020 boldly puts forward a vision for the University of Mary Washington to be a leader in the Digital Liberal Arts, in no small part by integrating **advanced digital fluency** into the curriculum (Goal 1.2.1).⁶ The primary task of the Working Group on Digital Fluency was to devise strategies and recommendations on said integration. Our first challenge was to adequately define what advanced digital fluency meant to us and our campus. This task was particularly challenging because, as stated by a recent report by the New Media Consortium, there is "a lack of agreement on what comprises digital literacy."⁷

The Working Group consulted numerous resources, including the above cited works, along with much of the work being done overseas by places such as the Open University⁸ and Jisc,⁹ as well as publications such as *The Essential Elements of Digital Literacies* by Doug Belshaw.¹⁰ We concentrated, as well, on the concept of advanced digital fluency; we thus focused on the aspirational, what we wanted our students to have as their capacity at graduation (see **Appendix 4** for the full Working Group process).

Based on these various readings, experiences, and understandings, our definition is as follows:

Advanced digital fluency is the ability to consume and produce digital knowledge critically, ethically, and responsibly, as well as to creatively adapt to emerging technology.

The definition is purposely short and disciplinarily neutral. It incorporates values that are already practiced at UMW, such as information literacy, knowledge production, critical thinking paired with ethical actions, and creativity, while emphasizing the evolving nature of what can be understood as "the digital."

Advanced digital fluency builds on what we are already doing in particular around information fluency, as introduced to students in the FSEM courses, and is supported and reinforced by the Libraries in collaboration with academic programs. But, as The Open University puts it, digital fluency "goes beyond [information literacy] to encompass communication, collaboration and teamwork, social awareness in the digital environment, understanding of e-safety and the creation of new information."¹¹

Curricular Integration - Current Landscape

Not only is there little consensus on the definition of advanced digital fluency, at least in the American higher education context, there are few examples of it being widely integrated on campuses. The kinds of examples that do exist can be divided into two broad categories: **Initiatives** and **Individual Programs.** Both the New Media Consortium $(NMC)^{12}$ and AAC&U¹³ reports list a number of examples (which include our own Domain of One's Own project, as well as other schools who have adopted the initiative), but they are limited in size, scope, or implementation – the examples are mostly pilot projects, special interest opportunities, or individual programs or departments that have the goal of increasingly digital capacities or fluency.

Take Domain of One's Own as an example. While it is a valuable initiative to further advance digital fluency skills, it remains one tool, one technique, one approach to facilitate the integration of advanced digital fluency into the curriculum.

In fact, myriad initiatives, projects, and programs exist at UMW that support or facilitate the acquisition of advanced digital fluency skills: Division of Teaching and Learning Technologies (DTLT), the Center for Teaching Excellence & Innovation (CTE&I), the Hurley Convergence Center (HCC), the Communications and Digital Studies major (and Digital Studies minor), History and American Studies, the Digital "Achieving meaningful effects from digital tools...or high impact learning practices depends on connecting core institutional services and practices that have typically been disconnected." - Randy Bass

Archiving Lab, the Digital Knowledge Center (DKC), the ThinkLab, UMW Libraries, Domain of One's Own, UMW Blogs, and the Digital Pedagogy Lab Institute...And this is only a partial list. Much like the lists produced by NMC and AAC&U, they remain pieces that can and do support the development of advanced digital fluency skills, pieces however that can be better tied together into a curricular whole.

In the literature consulted, it became clear that for a plan to incorporate the learning outcome of advanced digital fluency to be effective, it must be **integrative.** In other words, it is "diffused throughout different classes in appropriate ways that are unique to each learning context."¹⁴ Bass and Eynon call what they are proposing "rebundling" of what has been increasingly and troublingly unbundled in higher education, but particularly liberal education: "Achieving

meaningful effects from digital tools...or high impact learning practices depends on connecting core institutional services and practices that have typically been disconnected."¹⁵

One such plan is described in a report from Virginia Commonwealth University (VCU) examining the integration of what VCU calls "Connected Courses." One of the goals of connected courses was to improve the digital fluency of the students.^{*} The report recognizes the importance of effective, careful integration, and recommends that the courses be a part of the University College's "Focused Inquiry" courses. VCU, a much larger institution than UMW, faces a different set of challenges when trying to incorporate digital fluency into the broader curriculum, but still recognizes the importance of taking an integrative approach.

Currently, a student at UMW may or may not encounter any of the various initiatives, projects, and programs listed above; it largely depends on a number of variables, including what Residence Hall they live in their Freshman Year (which is dictated by which FSEM they take), which professors they select for various classes, and what major and minor they choose. And then, even if they do engage in digitally inflected activities, those activities may or may not include elements of advanced digital fluency. Taking an integrative approach would mean that *every* student would have a cohesive and coordinated experience, benefitting from the myriad of opportunities and resources as well as developing demonstrable skills and capabilities.

^{*} Laura Gogia, "Connected Courses at Virginia Commonwealth University: Designing Digitally-Forward Learning Experiences That Promote Student Success in a Networked World" (Richmond, VA: Virginia Commonwealth University, 2016), <u>http://lauragogia.com/connected-course-design/</u>. This report also provides another excellent definition of digital fluency: "Digital fluency has been defined as a form of connectivity: a multi-layered (e.g. technical, relational, analytical, and creative) approach to skills, knowledge, and dispositions related to self-expression and networked communication in the digital world. Individuals who possess digital fluency are able to leverage their knowledge of digital processes and platforms to develop productive, meaningful, and flexible workflows within and across digital networks of people, resources, and information."

Integration Options - UMW

The Working Group identified and explored four different, but interrelated, models for curricular integration for UMW:

- 1. FSEM
- 2. Digitally Intensive Courses
- 3. Programmatic Intro/Capstone
- 4. Programmatic Learning Outcomes

Each model comes with its own set of advantages and challenges.

FSEM

In this model, digital fluency would resemble a "4th QEP" element, alongside speaking, writing, and information literacy.

Advantages of this model:

- 1 Already some overlap with writing, speaking, and information literacy.
- 2 Could be introduced via an online module.
- 3 Signal to students immediately upon arrival that this is a skill that is both valuable and taught here at UMW.

Challenges of this model:

- 1 Integrating another element in an already requirement-heavy course due to QEP requirements.
- 2 Maximizing impact in a class that is likely to only cover an introduction to the skills.
- 3 Addressing the reality that the FSEM is not the place where "advanced" skills can be practiced or acquired.

Intensive Designation

In this model, there would be a requirement that students take two (2) courses designated "Digitally Intensive" (DI), much as they currently are required to take Writing and Speaking Intensive (WI and SI, respectively) courses.

Advantages of this model:

- 1 Maximum flexibility for both students and faculty through cross-curricular integration.
- 2 Limited duplication of courses if a student has a double major or changes majors as the Intensive Designation is cross-disciplinary.

Challenges of this model:

- 1 Low number of courses initially offered, making it difficult for students to meet requirement.
- 2 Students may not develop advanced digital fluency skills within their major.
- 3 Two classes may not be enough to develop advanced digital fluency skills, if those skills are not also reinforced in their other classes (writing and speaking, by comparison, benefit from being infused throughout the curriculum as more traditional forms of scholarly communication).

Major Integration - Introduction/Capstone

In this model, each program would integrate digital fluency into their major introductory course and the capstone course/experience.

Advantages of this model:		
1	Allows for students to develop digital skills in the major.	
2	Shows skills growth based on points of assessment at the beginning and end of program.	
3	Allows faculty in program to decide how to best integrate, assess skills.	
Challenges of this model:		
1	Ensuring that digital fluency skills are reinforced in students' other courses.	
2	Guaranteeing that skills are being applied consistently across programs.	

Major Integration - Programmatic Learning Outcome

In this model, departments would be encouraged to incorporate digital fluency into their programmatic goals.

Advantages of this model:		
1	Least prescriptive model. Faculty would be empowered to implement digital fluency in whatever way they desire, which could drive adoption, emphasizing relevance to their course of study while also defining what digital fluency means in their discipline.	
2	Allows for scaffolding of beginning, intermediate, advanced skill development and thus can be built into a range of courses throughout a program.	
Challenges of this model:		
1	Inconsistent implementation across programs.	
2	Guaranteeing that skills are being applied consistently across programs.	
3	Inconsistent identification and adoption of learning outcomes, and inconsistent assessment across the campus.	

Resources Required



Each of these models require **resources** in the form of infrastructure support and faculty development support. The Working Group strongly recommends that Goal 1.2.2 of the UMW Strategic Plan 2020 be implemented: "Restore the line item in the budget for a regular replacement cycle for faculty and staff computers." In any model of integration, faculty must have access to more up-to-date hardware and software in order to be able to best teach our students digital fluency skills.

Further, we must commit to maintaining (possibly expanding) and continually upgrading computer labs and other digital spaces for students, to provide reliable access to hardware, software and digital resources. We want to ensure our students have equal access to the tools necessary to practice and implement digital fluency skills. We also want to ensure that these resources and course materials are accessible to all students.

On the faculty development end, there needs to be funding and support in the form of course releases and compensation for course and curricular development. DTLT and CTE&I need added resources to be able to provide faculty development, support, and facilitation for these initiatives. The Libraries would also need additional resources for both faculty and student support, including a **digital repository** (as called for in the last two strategic plans) to support and preserve the new forms of research and scholarship. Finally, the DKC would need additional resources in order to support an increased number of students seeking out their services.

Integration Recommendation



We recommend combining elements of all four models into one hybrid plan for several reasons. Based on best practices and our overall goals for UMW, as well as the discussions of the various models, there is consensus that no individual model works in isolation to achieve the kind of integrative approach we are looking for. Much like how Writing and Speaking Intensive courses are reinforced by the students' academic work in other classes, digital fluency needs to be integrated at various points throughout the curriculum. Because our definition is so broad, it allows departments and programs the flexibility to refine the definition according to their disciplinary practices and to more organically incorporate it into the existing curriculum.

If this hybrid plan is implemented, students would learn about digital fluency throughout their experience at UMW regardless of what major they select. Students would hone their digital fluency skills in ways that are grounded in disciplinary practices, building on prior experience and knowledge gained in earlier courses. Students would graduate with a clear set of demonstrable skills and knowledge that they can then communicate to future employers, with the ability to adapt to the inevitable changes in the digital landscape.

Another reason to pursue a hybrid plan, instead of selecting any one of the four models, is that each model faces its own particular challenges. The challenges of any one model can be addressed using elements from other models. For example, as previously stated, the FSEM model faces the challenge that the FSEM is not the place where "advanced" skills can be practiced or acquired. We can address this by adding elements from the other three models that target upperclassmen, such as the capstone experiences from the Major Integration --Introduction/Capstone model.

We recommend taking a phased approach to fully integrating advanced digital fluency across the curriculum, starting with integrating the concept into the FSEM, and then creating a series of "Digitally Intensive" courses. Simultaneously, departments and programs would be invited to examine how their programs could integrate their disciplinary form of digital fluency into their curriculum, building on what they are already doing. We envision this as a three-year process, and we propose specific goals for each year (see pages 13-14).

The Digitally Intensive designation allows for a phased integration, initiating the conversation around digital fluency and how it fits within the discipline. Faculty may begin with a Digitally Intensive class and expand from there. The Working Group also closely examined the current program SLOs from across campus; for many departments, the integration of digital fluency into their curriculum would fit well with what they are already doing around information literacy, digital communication, ethics, and creativity. Others will need more advice, facilitation, and support, which can be provided by the various resources under TTI.

Students would hone their digital fluency skills in ways that are grounded in disciplinary practices, building on prior experience and knowledge gained in earlier courses. Students would graduate with a clear set of demonstrable skills and knowledge that they can then communicate to future employers, with the ability to adapt to the inevitable changes in the digital landscape.

Proposed Three-Year Plan

Year One

- In collaboration with the FSEM Committee and QEP Coordinator, begin developing FSEM integration through existing faculty development, in collaboration with TTI, building off of the existing modular Domain of One's Own curriculum developed by DTLT.¹⁶ The goal is to provide multiple integration strategies to give students a basic introduction to digital fluency.
- Create a Digitally Intensive Committee to gather input from across campus and develop more specific learning outcomes and criteria for becoming a DI course (See Appendix 3 for sample learning outcomes), then begin soliciting course applications, in collaboration with TTI. The DI Committee would also begin the process for faculty approval of this new skill-intensive requirement, potentially in concert with a larger discussion about changes to the General Education requirements.¹⁷
- Ensure proper assessment strategies exist for evaluating the effectiveness of the integration into the FSEM courses and DI courses.
- Initiate faculty development to expand the capacity of faculty in digital fluency and digitally enabled course development. There should be opportunities for faculty to share current best practices for integrating advanced digital fluency into their courses.
- Begin the process of soliciting departments and programs to participate in the facilitation and development of a plan for the integration of digital fluency into their curriculum and learning outcomes.

Year Two

- Integrate in the FSEM, and pilot a number of DI courses.
- Increase faculty development, encouraging the expansion of DI courses to more disciplines.
- Continue the process of soliciting departments and programs to participate in facilitation and development around the integration of digital fluency into their curriculum and learning outcomes.

Year Three

- Encouraged departments and programs to present a plan as to how they would integrate digital fluency into their programmatic learning outcomes, with the support of TTI.
- Begin reviewing assessment data on FSEM and DI courses, in collaboration with the Office of Institutional Analysis and Effectiveness, to inform conversations of larger programmatic integration, and to inform how these integrations would be assessed and evaluated.
- Continue faculty development targeting the integration and assessment of advanced digital fluency across the curriculum.
- Establish a working group by the end of the cycle to evaluate the progress of the initiatives and integration, in order to make recommendations moving forward.

There is tremendous potential for UMW to become a true national leader in the Digital Liberal Arts by taking an integrative approach to digital fluency across the curriculum. Our definition provides the flexibility for faculty to shape how their discipline and program understands and implements advanced digital fluency. The plan for integration is phased in its approach so that faculty can have ownership and receive the support required in order for successful integration. The Working Group is excited by the potential of this plan to truly transform the student learning experience here at UMW and position us as a leader and an institution of choice.

Endnotes

¹ University of Mary Washington, Provost's Committee on Digital Initiatives, *Final Report from the Ad-Hoc University Committee on Digital Initiatives* (Fredericksburg, VA, 2008), http://umwhistory.org/diginit/files/ReportDigInit2.pdf.

² Randy Bass and Bret Eynon, *Open and Integrative: Designing Liberal Education for the New Digital Ecosystem* (Washington, DC: Association of American Colleges & Universities, 2016), 3,

https://secure.aacu.org/store/detail.aspx?id=GMSDIG. A digital copy can be provided upon request.

³ Troy D. Paino, "All UMW Opening Assembly Spring 2017" (address given at the University of Mary Washington, Fredericksburg, VA, January 19, 2017), Vimeo video, 58:27, posted by University of Mary Washington, January 20, 2017, https://vimeo.com/200410830.

⁴ University of Mary Washington, *Undergraduate Academic Catalog 2016-2017* (Fredericksburg, VA, 2016), 5, http://publications.umw.edu/undergraduatecatalog/files/2011/09/Undergrad-Catalog-2016-17-FINAL.pdf.

⁵ See Hart Research Associates, "It Takes More Than a Major: Employer Priorities for College Learning and Student Success," *Liberal Education* 99, no. 2 (Spring 2013), <u>https://www.aacu.org/publications-</u>

research/periodicals/it-takes-more-major-employer-priorities-college-learning-and, and Pew Research Center, *The State of American Jobs* (Washington, DC: Pew Research Center, 2016),

http://www.pewsocialtrends.org/2016/10/06/the-state-of-american-jobs/.

⁶ University of Mary Washington, *Mary Washington 2020: Excellence. Impact. Distinction.* (Fredericksburg, VA, 2016), <u>http://provost.umw.edu/files/2016/03/UMW2020.pdf</u>.

⁷ B. Alexander, S. Adams Becker, and M. Cummins, *Digital Literacy: An NMC Horizon Project Strategic Brief* (Austin, TX: The New Media Consortium, 2016), 1, <u>http://cdn.nmc.org/media/2016-nmc-horizon-strategic-brief-digital-literacy.pdf</u>. The report also states that digital literacy can also be referred to as "digital fluency" (4). It should be noted that most of the literature deals with the concept of "digital literacy" or "digital capabilities", but we are more ambitious for our students, and thus the term "digital fluency" was selected by the authors of the strategic plan.

⁸ Katharine Reedy and Robin Goodfellow, *Digital and Information Literacy Framework* (The Open University, 2016), http://www.open.ac.uk/libraryservices/pages/dilframework/.

2016), <u>http://www.open.ac.uk/libraryservices/pages/dilframework/</u>.
⁹ Jisc, "Developing Digital Literacies," *Jisc*, last modified December 16, 2014,

https://www.jisc.ac.uk/guides/developing-digital-literacies.

¹⁰ Doug Belshaw, The Essential Elements of Digital Literacies (Self-published, 2014), http://digitalliteraci.es/.

¹¹ Reedy and Goodfellow, *Digital and Information Literacy Framework*.

¹² Alexander, Adams Becker, and Cummins, *Digital Literacy*.

¹³ Bass and Eynon, *Open and Integrative*.

¹⁴ Alexander, Adams Becker, and Cummins, *Digital Literacy*, 6.

¹⁵ Bass and Eynon, *Open and Integrative*, 61.

¹⁶ Lee Skallerup Bessette, "Leveling Up with Domain of One's Own," *UMW DTLT Blog*, October 28, 2016, http://umwdtlt.com/leveling-up-with-domain-of-ones-own/.

¹⁷ If, as noted in the Strategic Plan, UMW begins a broad revision of the general education requirements, the DI requirement approval would logically be a part of those discussions.

Appendices

Appendix 1: Bibliography

- Alexander, B., S. Adams Becker, and M. Cummins. *Digital Literacy: An NMC Horizon Project Strategic Brief*. Austin, TX: The New Media Consortium, 2016. <u>http://cdn.nmc.org/media/2016-nmc-horizon-strategic-brief-digital-literacy.pdf</u>.
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Appendix 2: Glossary of Resources

American Association of Colleges & Universities (AAC&U): From their website: "AAC&U is the leading national association concerned with the quality, vitality, and public standing of undergraduate liberal education. Its members are committed to extending the advantages of a liberal education to all students, regardless of academic specialization or intended career. Founded in 1915, AAC&U now comprises nearly 1,400 member institutions—including accredited public and private colleges, community colleges, research universities, and comprehensive universities of every type and size."

Center for Teaching Excellence & Innovation: The Center for Teaching Excellence and Innovation (CTE&I) at UMW is designed to sustain the professional growth of faculty across the career span and across disciplines. CTE&I provides faculty with professional support and mentoring on teaching and learning, pedagogical innovation, the scholarship of teaching and learning, and leadership. CTE&I supports the overall mission of the University as the institution's primary site for faculty professional development opportunities to explore teaching and learning in professionally meaningful ways.

Digital Archiving Lab: The mission of the Digital Archiving Lab at UMW is to convert Simpson Library's rare and unique archival materials to digital formats. Using specialized equipment and specifications to properly handle materials, we digitize rare books, manuscripts, photographs, scrapbooks, and more. These digital objects are used to support the research and teaching goals of the UMW community, and can be accessed on many platforms among the Library's online digital collections.

Digital Knowledge Center (DKC): The University of Mary Washington's Digital Knowledge Center provides peer tutoring to all University students on digital projects and assignments. Students can schedule one-one-one or small group tutorials with a trained peer tutor on a variety of subjects relating to common systems, technologies, and tools used in courses at UMW. Students interested in sitting down with a tutor to discuss an extra-curricular project are also welcome to schedule appointments.

Digital Pedagogy Lab Institute (DPLI): Digital Pedagogy Lab is a five-day Summer institute hosted by UMW that explores the role and application of digital technology in teaching. The institute will has numerous tracks, offering intensive peer-driven learning with and discussion of networked learning, new media, and critical digital pedagogy.

Division of Teaching and Learning Technologies (DTLT): The Division of Teaching and Learning Technologies at UMW is a group of creative, reflective educators and technologists who foster community around and drive advances in teaching, learning, and research, by developing pedagogical partnerships with faculty and academic units.

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Domain of One's Own (DoOO): Domain of One's Own is a project at the University of Mary Washington managed by the Division of Teaching and Learning Technologies (DTLT). The DoOO project allows UMW students, faculty, and staff to register their own domain name and associate it with a hosted web space, free of charge while at UMW. With their Domain and corresponding web space, users will have the opportunity and flexibility to design and create a meaningful and vibrant digital presence.

Jisc: Previously the Joint Information Systems Committee, Jisc "are the UK higher, further education and skills sectors' not-for-profit organisation for digital services and solutions. We are: Dedicated entirely to the sectors' individual and collective needs; not a vendor: we deal with and/or work with vendors and publishers on the collective behalf; not for profit: every pound is used for the sectors' benefit; objective, but not unbiased: we put the sectors' interests above all else."

New Media Consortium (NMC): From their website: "The NMC (historically the New Media Consortium) is an international community of experts in educational technology — from the practitioners who work with new technologies on campuses every day; to the visionaries who are shaping the future of learning at think tanks, labs, and research centers; to its staff and board of directors; to the advisory boards and others helping the NMC conduct cutting edge research."

The Open University: From their website: "The Open University's mission is to be open to people, places, methods and ideas. We promote educational opportunity and social justice by providing high-quality university education to all who wish to realise their ambitions and fulfil their potential. Through academic research, pedagogic innovation and collaborative partnership we seek to be a world leader in the design, content and delivery of supported open learning."

ThinkLab: The ThinkLab is the exciting makerspace located in the Simpson Library at the University of Mary Washington. As a collaboration between the Division of Teaching and Learning Technologies, the College of Education, and the UMW Libraries, the ThinkLab hosts a variety of emerging technologies and tools for students and faculty across all disciplines, such as 3D printing, robotics, and electronics work using Arduinos.

UMW Libraries: The UMW Libraries constitute the knowledge center of the university — a physical and virtual manifestation of the institution's mission of connected, integrated, and engaged teaching, learning, research, and service. Specifically, the Libraries are: spaces where people collaborate, gather, research, and share; technology- and human-enabled engines, showcases, and catalysts of innovation; dynamic repositories of the university's teaching, research, and service that is responsive to the needs and status of diverse users and learners.

Appendix 3: Sample Student Learning Outcomes

These learning outcomes are taken from a 2011 QEP Plan that was selected as a finalist during the last selection cycle. While, ultimately, this plan was not selected, it was nonetheless written by a representative selection of faculty, staff, and students from across campus. The learning outcomes shared here are just an example as to what such learning outcomes might look like when implementing advanced digital fluency or developing Digitally Intensive courses. The full report can be found at http://qep.umwblogs.org/final-proposals/digital-knowledge-initiative/. There is also a full assessment plan in the aforementioned plan. The original numbering from the plan has been preserved.

- 6.1 Students will be able to consume digital information by
 - 6.1.1 successfully locating high quality digital information using the Internet and library databases
 - 6.1.2 safely and effectively exchanging information and ideas online
 - 6.1.3 using digital information in an ethical manner
 - 6.1.4 understanding the social, legal, and cultural issues surrounding the use of digital information
- 6.2 Students will be able to express ideas with digital information and media by
 - 6.2.1 creatively using digital text, media, and data
 - 6.2.2 working collaboratively with online digital tools to produce new information resources
 - 6.2.3 identifying and evaluating digital tools needed for the design and development of projects
 - 6.2.4 applying digital technologies in meaningful ways across various disciplines of study
- 6.3 Students will be able to analyze digital information and technologies by
 - 6.3.1 evaluating the quality of digital information
 - 6.3.2 identifying typical components of technology tools and anticipating how to use them
 - 6.3.3 developing a self-reliant approach to solving technology and information challenges
 - 6.3.4 creating digital artifacts specific to content objectives and concepts

In addition to the specific student learning outcomes identified here, in order to be successful, the Project must also be concerned with Faculty learning as well. Therefore, we propose a fourth faculty-focused learning outcome.

- 6.4 Faculty will demonstrate a proficiency in teaching with digital and information resources by:
 - 6.4.1 identifying specific digital resources which are relevant and important to the subjects they are teaching
 - 6.4.2 understanding how digital resources can be used to create effective and progressive learning environments
 - 6.4.3 improving and enhancing existing curriculum with the integration of digital tools and resources
 - 6.4.4 developing assessment techniques and tools for student work that uses digital resources

Appendix 4: Advanced Digital Fluency Working Group Process

When the UMW Strategic Plan 2020 was approved in February 2016, the Teaching, Technology, and Innovation (TTI) unit, through a series of meetings, began to break down which parts of the plan fell under their purview, then assigned individual members for implementation. DTLT Executive Director Jesse Stommel and Special Assistant to the Provost for Teaching, Technology, and Innovation Jeffrey McClurken tasked Instructional Technology Specialist Lee Skallerup Bessette with chairing a Working Group to address Strategic Goal 1.2.1.: "Incorporate digital fluency in the curriculum, either as part of general education or by enhancing the digital content within major programs. The Teaching, Technology, and Innovation division will design a plan in AY 2016-17 to guide this conversation."

Discussions took place towards the end of the Spring 2016 semester with the University Librarian, the three academic Deans, and the Provost in regards to the scope and composition of the Working Group. Once there was agreement over these issues, over the summer, Dr. McClurken reached out to a cross-institutional and disciplinary number of faculty members to see if they would be willing to participate, while University Librarian Rosemary Arneson selected three librarians to represent the UMW Libraries (one of the librarians, Allison Shepard, left her position in January 2017 and was not replaced on the Working Group). Dr. McClurken also invited the Directors of the DKC and CTE&I to represent TTI on the Working Group.

The first meeting of the Working Group took place in August 2016, and they met monthly thereafter to first define Advanced Digital Fluency, survey the landscape and read the relevant literature, assess various implementation strategies, and devise recommendations. The report itself was primarily written by the chair, Dr. Skallerup Bessette, based on the discussions and recommendations of the Working Group during their meetings. The Working Group provided feedback on three successive drafts of the report. Nigel Haarstad and Jessica Reingold of DTLT assisted with the formatting of the document, while Peter Catlin of UMW Libraries assisted with the Bibliography and Endnotes.

The report was presented to the Acting Provost and President at the end of March 2017.