STATE COUNCIL OF HIGHER EDUCATION FOR VIRGINIA

Virginia Institutions of Higher Education Guidelines to Move OER Forward

Virginia Code § 23.1-1308 states: *The governing board of each public institution of higher education shall implement guidelines for the adoption and use of low-cost and no-cost open educational resources in courses offered at such institution. Such guidelines may include provisions for low-cost commercially published materials.*

This guidance document was developed by the SCHEV Open Virginia Advisory Committee as a model of practice for college and university governance officials and administrative staff with responsibility for developing institutional policies. This resource is designed to provide recommended language for fundamental elements of institutional Open Educational Resource (OER) policies. Supplemental information is provided in an appendix, to support institutional deliberations about potential components of such policies.

Table of Contents:

I. Prologue

Adoption, adaption and creation of open educational resources have been identified in *The Virginia Plan for Higher Education* as activities aligned with Goal 1: Providing Affordable Access for All. The Code already required the governing boards of the

public institutions of higher education to implement "policies, procedures and guidelines to minimize the cost of textbooks" and to provide for the availability of textbooks for students otherwise unable to afford the costs. Many institutions have deployed cost containment strategies, for example investment in library licensed content to replace textbooks. The focus of this document is explicitly on OER, in order to assist the institutions in navigating the new practices that have emerged from the increased availability and use of openly licensed content.

In fact, widespread adoption of open educational resources would promote numerous goals and initiatives in the Plan. Student success can be improved through the availability of OER, as persistence and completion are encouraged when course materials are freely available. A growing body of peer-reviewed research suggests that switching from traditional course materials to open educational resources generates benefits for students in terms of cost savings, higher grades and improved course completion rates. Creation and/or adaption of OER is an innovative practice that can lead to efficiencies through cross-institutional and/or cross-disciplinary collaboration. Positive feedback from faculty who have adopted and created open course materials demonstrates that OER initiatives can also support faculty excellence and scholarship. Effective implementation of open educational resources will depend upon the engagement of well-informed institutional staff and faculty and will be enhanced by consideration of appropriate policies.

II. Purpose

The purpose of these guidelines is to help institutions fulfil their new obligation under § 23.1-1308 within a framework that promotes quality and sustainability. The guidelines promote the utilization and creation of open educational resources and efforts to scale to full OER programs. The italicized sample guideline language within each section can be adopted or adapted by individual institutions and the Appendix supplies supplemental information and references to aid in planning for implementation. To realize the full potential of OER, college and university governance officials must publicly demonstrate their support by making OER policy that is aligned with the college or university vision and mission and that rewards collaboration. Implementing an institution-level OER policy signifies support from leadership and creates a

supportive environment for faculty, staff, and students to explore the potential of OER and the benefits for students. SCHEV recommends that each institution appoint an ongoing stakeholder committee to review and update provisions as appropriate given the rapidly changing environment surrounding educational resources.

III. Proposed Guideline Framework

The framework recommended here covers elements A. through H. and provides sample language for each element. The language can be customized to align with an individual institution's OER efforts.

A. Purpose

Sample language: *The institution encourages the creation, use, adaptation, sharing and ongoing maintenance of OER materials in accordance with established curriculum standards for educational purposes. The goals of this policy are to provide students with high quality learning materials that are openly licensed to augment and/or replace costly textbooks and course materials, to create sustainable academic resources for students, faculty, and staff, and to provide opportunities for professional growth of faculty and staff.*

This policy provides guidance to faculty in achieving the following outcomes through the utilization of Open Educational Resources (OER) at [institution name]: improve student success through increased access and affordability, and improve teaching efficiency and effectiveness through the ability to focus, analyze, augment, and evolve course materials directly aligned to course learning outcomes. Faculty will be supported in their participation with OER to achieve both of the stated outcomes.

Additional considerations:

- Institutions with a research, publication, or service orientation may wish to add language regarding desired outcomes for research, publication, and/or service.
- Institutions may wish to specify the parameters of "sharing" of materials that is encouraged, e.g., requiring that institutionally funded projects are publicly disseminated.

B. Definition of Open Educational Resources (OER)

Sample language: *Open Educational Resources (OER) are freely and publicly available teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge.*[1]

C. OER Policy Statement

Sample language: *[The institution] shall make use of OER materials in accordance with the provisions of the institution's Intellectual Property policy; the Creative Commons licensing standards; the Digital Millennium Copyright Act of 1998; applicable state and federal copyright laws; accepted best practices of the OER community, including a succinct and well-accepted definition of OER; and college policies and academic standards.*

[The institution] will provide training, support, and encourage recognition of OER use, adaptation, and creation as a meaningful scholarly and professional endeavor. Courses using only OER will be labeled as such in the institution's course registration system.

Additional considerations:

- In choosing textbooks, faculty should be aware of OER course materials available in their disciplines. They should seriously consider adoption of OER materials for their courses as appropriate.
- Adoption of OER is fundamentally no different than adopting a commercial text.
- Instructors must communicate their adoption of OER to the College Bookstore, along with any desire for the bookstore to sell printed copies of the OER (if they exist).
- Instructors must communicate their textbook choices to the Registrar for the course registration materials. It might make sense for the bookstore to be the conduit for this.

[1] While other helpful definitions may exist, the Open VA Advisory Committee recommends this statement, adapted from that articulated by the Hewlett Foundation, which is the most comprehensive and broadly utilized: http://www.hewlett.org/programs/education/open-educational-resources. Costs related to printing and open access infrastructure are not always reflected in the costs to students or institutions.

- OER offers the ability to adapt materials to better fit the learning goals of one's courses. Of course, this takes more effort than simply using off-the-shelf course materials. OER creation, especially the creation of open textbooks is a major undertaking, just as writing a commercial textbook is. Faculty who wish to create (or modify) open textbooks are spending their own time and resources towards this goal. Creating open textbooks should be supported in all the ways that writing commercial or scholarly books is, for example, sabbatical leaves, etc.
- Some institutions choose to identify courses which use exclusively OER as "zero cost courses", or similar terminology, in their student facing course registration systems. The purpose of this is to alert students to the anticipated course material cost of the various courses available to them. [2]

D. Licensing OER/Legal Context

Sample language: *The institution's intellectual property (IP) and copyright policy, titled [insert title], governs rights and requirements for works created during the course of employment, including ownership, open licensing, and public release.*

Faculty or staff who create original content that is incorporated into an OER course or create OER of other types or formats are encouraged to place the most open license possible, such as a Creative Commons Attribution License (CC-BY) (or equivalent for software) on such content before or at the time it is introduced into the course. Faculty adapting OER are encouraged to use the least restrictive license possible. It is the faculty member's responsibility to ensure that such content is eligible for and meets the standards for each license. Best practices for incorporation of third party works (permission, fair use, etc.) must be followed as is required by U.S. Copyright law.

Additional considerations:

- For perspectives regarding the inclusion of third party works within OER, see Appendix A.

[2] For guidance concerning OER course markings: http://libguides.uta.edu/txtoolkit; http://libguides.uta.edu/TXtoolkit/examples

- OER may be addressed in an existing IP policy or addressed separately in an OER policy. In either case, the use and creation of OER does not supplant an institution's IP policy.
- Institutions with a research, outreach, or service mission may wish to add language to this section.

E. OER Procedures and Responsibilities

Sample language: *[position title] shall be responsible for developing and maintaining procedures that are consistent with this policy and that comply with applicable regulations, policies, and procedures of the institution, and the laws and regulations of the Commonwealth of Virginia.*

Administration and management efforts shall include advocating for the creation of OER to be recognized as a meaningful scholarly and professional endeavor.

Faculty, staff, and students using, adapting, and creating OER are responsible for obtaining permission for incorporating student created works into OER or an OER course.[3]

Employees of the institution are responsible to follow relevant laws and policies regarding accessibility of learning materials for persons with disabilities. The institution will provide guidance and agreed upon levels of support to achieve accessibility requirements.[4]

For OER designated courses or OER-created content, faculty are to use only content that adheres to the following OER Community standards: Retain, Reuse, Revise, Remix and Redistribute, which includes content in the Public Domain. It is the faculty member's responsibility to ensure that content incorporated into OER or OER courses is eligible for and meets the standards for the license selected and is properly attributed. Faculty may Faculty may consult with the institution's OER expert to determine eligibility and correctly note attributions.

[3] Mays, E. (Ed). (2017). A Guide to Making Open Textbooks with Students. The Rebus Community for Open Textbook Creation: Montreal. https://press.rebus.community/makingopentextbookswithstudents

[4] Some technical guidance within the context of open education is available through: Collidge, A., Doner, S., & Robertson, T., (2015) BCcampus Open Education Accessibility Toolkit. https://opentextbc.ca/accessibilitytoolkit

Additional considerations:

- Some courses or learning resources require use of content under Fair Use or with permission. However, if third party content is necessary, further guidance should be sought from the institution's copyright officer and/or legal counsel. When content is used with permission, this permission should include release of the content under the same license as the course or learning resource.[5]
- Librarians should serve a central leadership, education, and training role for faculty, staff, or students wishing to use, create, or adapt OER or to incorporate OER into a course. Among the support provided by designated librarians are facilitating OER training, assisting faculty in the location, curation, and marking of OER content, and advising regarding public discoverability. Additional support should be provided by faculty leaders, instructional designers, pedagogy experts, and an OER advisory group representing a cross-section of institutional stakeholders.

F. OER Training and Professional Development

Sample language: *The institution designates [selected staff] to provide training regarding finding OER; understanding intellectual property, copyright, and open licenses; adopting and adapting OER; incorporating OER in courses; and creating best practices for sharing and enabling discovery of OER.*

Additional Considerations:

- Institutions without an OER training program may wish to utilize, adapt, or collaborate on the development of a training program.

G. OER Technical Format, Archiving, and Discovery

Sample language: *OER and OER courses shall be published in electronic format(s) that permit free, public and preferably easily editable access to the content, course content, course materials, and any supplemental materials. OER and OER courses shall be publicly shared in a stable publicly accessible location and utilize naming and/or metadata conventions to enable discovery within and beyond Virginia.*

[5] Weeramuni, L. (2018). Sample permissions letter. MIT Open Courseware: Cambridge, MA. https://drive.google.com/open?id=1h_x0-LXzu2JiNIVOGAkxXQOUhs_6kPfd

Additional considerations:

- Access to course assessments (e.g., test banks) may be limited to instructors for academic integrity purposes.
- Institutions are encouraged to enable printable versions of materials.
- Further cross institutional collaboration may be needed in defining, establishing, and achieving best practices regarding technical formats, institutional data ownership, migration of content, enabling public access and reuse, archival standards, and enabling discovery.

H. OER Quality Assurance

Sample language: *As subject matter experts, faculty are responsible for selecting, adapting or creating OER in alignment with course learning outcomes.*

Additional considerations:

- The institution may wish to designate one or more central and non-exclusive locations for OER or OER Course content to aid OER assessment or research on a broader scale.[6]
- Institutions may wish to require that faculty who teach an OER course document the effectiveness of the OER content in achieving learning outcomes in the same manner as learning outcomes are assessed for courses utilizing traditional materials. Data that may be considered for collection may include student engagement with the OER content, appropriateness of content, and student performance on assessments.

Authors of this policy thank Amanda Coolidge and Daniel DeMarte for the OER Policy Development Tool, released under a Creative Commons Attribution 4.0 International License.

[6] https://openedgroup.org/coup

APPENDIX

A. Definitions

Copyright

Copyright is a form of protection grounded in the U.S. Constitution and granted by statutory and case law for original works of authorship fixed in a tangible medium of expression. Copyright covers both published and unpublished work.

Data-ownership

Data ownership is the act of having legal rights and complete control over a single piece or set of data elements. It defines and provides information about the rightful owner of data assets and the acquisition, use and distribution policy implemented by the data owner. From https://www.techopedia.com/definition/29059/data-ownership

Intellectual Property License

A licensing agreement is a partnership between the rights' owner/author and another person who is permitted to use the property on agreed upon terms. Creative Commons licenses are examples of such licenses.

Open Educational Resources (OER)

"Open Educational Resources (OER) are teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others [such as through Creative Commons licenses which allow derivatives]. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge." From: http://www.hewlett.org/programs/education/open-educational-resources

- **no-cost OER:** resources in the Public Domain or bearing an intellectual property license that allows free use and repurposing.
- **low-cost OER:** Content released as OER never has a fee to use and re-purpose. OER never has a cost unless issued in a medium which is inherently physical and therefore has a cost (for example, for printing a hard copy). Platforms

offering openly licensed content with any additional legal or technical restrictions are not OER.

Open Licenses

Open licenses are intellectual property license that permits free use and re-purposing by others. Creative Commons licenses are a type of standardized license allowing authors to share their work more easily by giving advanced permission for their material to be shared and reused under terms that are flexible and legally sound. There are several types of licenses of Creative Commons:

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3. **Attribution-No Derivatives - CC BY-ND** - is the license that allows for redistribution, commercial and non-commercial, as long as it is passed along unchanged and in whole, with credit to the original author. This license is not considered OER.
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Public Domain

A work of authorship is in the "public domain" if it is no longer under copyright protection, is a type of work ineligible for copyright protection, is clearly marked as donated to the Public Domain, or if it was produced by a U.S. Federal employee in the course of their work. Works in the public domain may be used freely without the permission of the former copyright owner. Attribution is not legally required but encouraged as part of good scholarship.

Technical Openness

Technical openness refers to the ability of users to access resources that are referred to as open. To be technically open, the technology in which the content is housed does not intentionally or as much as possible unintentionally raise barriers to use, adaptation, customization, import and export of the content as prescribed through the license of the content.

B. Considerations Affecting Policy Development and Implementation

An institution-level OER Policy is best executed when written in collaboration with all stakeholders—faculty, governance committees, students, staff, leaders, boards—in a culture that embraces the premise of "Open."

1. Expected Institutional Benefits

Use, adaptation, creation, maintenance, and sharing of Open Educational Resources (OER) have benefits which accrue to institutions, faculty, students, and the public. For institutions, these may include increased student retention, reduced time to completion which increases institutional capacity and tuition revenue. For faculty, benefits include an ability to customize course materials to better fit their course, publication opportunities, and deeper engagement with teaching including open pedagogies.

Some specific potential benefits include:

- The application, creation, and longevity of OER results in higher-quality curricula and course materials, more engaged instructors, more efficient and effective teaching, and improved student access, success, and completion.
- Improved educational outcomes
- Deeper engagement with material by both students and faculty
- Preliminary research indicates improved DWS (drop-withdrawal-success) rates [i]
- Increased tuition revenue through improved retention (fewer DWS incidents means less tuition refunded)
- Course materials owned by the academy and shared with the world
- Collaborative opportunities within and among institutions
- Ability to broaden the reach of locally authored content
- Ability to adapt/remix content to fit a local need
- Pedagogy (creating/adapting OER with students as part of pedagogy)
- Satisfying student demand for affordable course materials
- Day one access to course materials regardless of financial aid status
- Current with higher education innovative practices
- Cultivating an educational community dedicated to maximizing access to learning

2. Expected Institutional Support (Costs)

Successful OER efforts take costs into account and recognize the short and long term gains -- financial, academic, and societal -- afforded by the relatively small investment. As stated in "Open Educational Resources: Policy, Costs and Transformation" (Miao, Mishra, McGreal at http://unesdoc.unesco.org/images/0024/002443/244365e.pdf), "While OER seem well placed to bring down total expenditures, they are not cost-free" (page 4).

The degree and type of costs depend on the breadth and depth of the institution's initiatives to integrate the use of OER into standard operating procedures. Costs might be direct expenditures, which institutions should budget for appropriately. Others

might be indirect costs, which require planning and flexibility. Both types of costs are likely to touch multiple areas of the organization. And both can be minimized when institutions are able to collaborate on shared-cost strategies. Some of the common types of costs are described below.

Time and Labor

Depending on the institution's approach to OER implementation, employee time and labor will likely be the most significant contributions that institutions will make to the OER effort. Institutions must plan and coordinate activities to accommodate schedules and departmental needs. Institutions might need to budget for financial incentives to employees and departments or develop non-financial alternatives in order to nurture the application, creation, and sustainability of OER. And if institutions outsource some of the required time and labor, they must budget appropriately.

Time and labor are required for the following types of activities:

- **Professional development:** Faculty, instructional designers, librarians, and others must develop an understanding of the OER environment (language, concepts, philosophies, resources) and the skills necessary to identify, curate, redesign, create and align materials and activities. Individuals will need time to participate in workshops, seminars, meetings, and other professional development activities.
- **Discovery, Adaptation and Alignment:** Faculty, instructional designers, librarians and others will need time to discover and adapt resources, align those resources with course and program objectives, and in some cases, completely redesign courses. Some OER efforts might involve transferring content to a CommonCartridge format.
- **Technical Development and Support:** If an institution elects to host its own digital repository, it will likely need to engage the help of network and system administrators, program developers, metadata experts, security personnel, and/or other technical and support experts to build out an infrastructure. In some cases, it might be necessary to outsource services.
- **Financial Support:** Regardless of the scope, all OER efforts will require some level of financial support. Examples of financial support activities include budgeting, dispensing funds, handling reimbursements, coordinating with the

payroll department, and coordinating cost-sharing procedures with other institutions.

- **Administration and Management:** Successful OER efforts require oversight, coordination, communication, advocacy, and in some cases, grant writing and management, and employee supervision. Administration and management efforts might also include advocating for OER to be recognized as a meaningful scholarly and professional endeavor.

Technology

At minimum, technology costs will be indirect, simply by virtue of creators and users leveraging the institution's technology infrastructure to discover, revise, and integrate OER. Some OER efforts might leverage specialized technologies such as Internet2 services, unique development tools, or commercially available platforms, which institutions might or might not already have access to. Highly involved institutions will implement OER-specific technologies such as a repository and even host a repository service for other institutions to use. Such a shared repository will likely involve direct technology costs, including access to federated identity services that the institution might or might not already utilize. In all cases, there will be in-direct and possibly direct time and labor costs as described in the section above.

It is important to note that some commercial platform vendors charge institutions each semester by the number of students who use their content and their delivery tools. Some institutions charge an additional fee to the students to recoup this cost. This approach has stirred some debate among the OER community.

Lost revenue

In this time of reduced state funding for higher education, many institutions are looking to their bookstores to "generate as much profit as possible" even while attempting to keep student costs affordable (https://www.universitybusiness.com/article/keeping-bookstore-prices-down-and-revenues). However, bookstores face steep competition from for-profit bookstores and online companies that sell textbooks at lower prices. OER could place greater stress on the bookstore's ability to meet revenue expectations.

C. Low-Cost Commercially Published Materials:

To maximize the benefits described above, it is recommended that institutional policies express a preference for OER over commercially published materials. While some publishers are offering more affordable course materials, the attendant exclusivity agreements limit access in ways that OER does not. Such agreements feature limited-time rentals as opposed to permanent access, do not allow or limit export of data/content in usable formats, charge students directly through the bursars' offices with an opt-out, create homework systems which charge for access, eliminate the resale market and control prices (replacing the used textbook market with short term electronic rentals), and sell access to systems called "open" or OER which are actually freely available elsewhere. Institutions should seek to avoid vendor lock-in and be nimble with contracts, institutional data, and content when working with commercial vendors. Institutions should ensure that students own and can freely access data generated by their activities. It should also ensure the protection of student privacy and be cognizant of unauthorized research by third parties mining student data or utilizing marketing efforts directed at students using their personally identifiable information (e.g. email).

D. Additional Resources Available for Institutions

The following organizations develop resources or conduct research around OER implementation:

- SCHEV Open VA Advisory Committee - Representatives from across higher education institutions in Virginia, with expertise in all areas of OER creation and adoption.
- Virtual Library of Virginia (VIVA) – A consortium of non-profit academic libraries across Virginia is implementing an Open and Affordable Course Content Program, with funding support from the Virginia General Assembly. The initiative will provide statewide infrastructure, training, and information to faculty and staff at member institutions. http://www.vivalib.org/openinitiatives/otn.html.
- SPARC (the Scholarly Publishing and Academic Resources Coalition) [https://sparcopen.org/]

- Lumen Learning - OER Policy Development Toolkit [http://policy.lumenlearning.com/]

[ii] **Studies on OER Impact on Drop, Withdrawal & Success Rates (In Chronological Order)**

Hilton and Laman (2012) compared withdrawal rates over two semesters in OER versus non-OER Introduction to Psychology course. In the spring semester the publisher's textbook was used and in the fall an open textbook. Results, based on a sample size of 740 students, indicated students had lower withdrawal rates in the fall with the use of the open textbook and higher final scores on a common final exam. However, the study did not test for statistical significance.

Feldstein, Martin, Hudson, Warren, Hilton and Wiley (2012) adopted the use of open textbooks for the School of Business at a four-year institution. In the fall of 2010 and spring of 2011, 1393 students took courses with the open textbook and their outcomes were compared to 2176 students in courses not utilizing OER. The researchers found significance for lower withdrawal and failure rates for students who took the courses with open textbooks.

Pawlyshyn, Braddlee, Casper and Miller (2013) utilized OER in basic math courses and found an increased pass rate when comparing semester to semester of pass rates. In the spring of 2011 with no OER course materials the pass rate was 48.4% as compared to the spring of 2013 with all courses using OER the pass rate was 60.2%. The researchers did not test for statistical significance.

Fischer, Hilton, Robinson and Wiley (2015) analyzed results from the Kaleidoscope Open Project from multiple community colleges in different disciplines. Of the 15 courses examined, two classes of students in the OER treatment group were significantly more likely to complete the course. In five of the treatment classes, students were significantly more like to receive a C or better.

Hilton, Fischer, Wiley and Williams (2016) compared drop, withdrawal and success rates between courses taught with OER versus non-OER in both face-to-face and online modality. Results indicated in the online sections less students dropped at the drop date in the OER sections, and in the face-to-face sections, more students completed with a C or better in the OER courses. Statistical significance was found for both results. This study also examined course throughput rates and found students who took the OER classes were more likely to sign up for additional credit hours.

Chiorescu (2017) studied OER use in college algebra comparing students taught with a publisher textbook from spring 2014 to students taught with OER in spring 2015. The percentage of students who earned a C or better increased by 6% from the spring of 2014 to 2015.