STATE POLICY RECOMMENDATIONS FOR PROVIDING EDUCATORS ACCESS TO COLLEGE- AND CAREER-READY OPEN EDUCATIONAL RESOURCES

Achieve

ABOUT ACHIEVE

Achieve is an independent, nonpartisan, nonprofit education reform organization dedicated to working with states to raise academic standards and graduation requirements, improve assessments, and strengthen accountability. Created in 1996 by a bipartisan group of governors and business leaders, Achieve is leading the effort to make college and career readiness a priority across the country so that students graduating from high school are academically prepared for postsecondary success. When states want to collaborate on education policy or practice, they come to Achieve. At the direction of 48 states, and partnering with the National Governors Association and the Council of Chief State School Officers, Achieve helped develop the Common Core State Standards. Twenty-six states and the National Research Council asked Achieve to manage the process to write the Next Generation Science Standards. Achieve has also served as the project manager for states in the Partnership for Assessment of Readiness for College and Careers, which are developing next generation assessments. And since 2005, Achieve has worked with state teams, governors, state education officials, postsecondary leaders and business executives to improve postsecondary preparation by aligning key policies with the demands of the real world so that all students graduate from high school with the knowledge and skills they need to fully reach their promise in college, careers and life. For more information about the work of Achieve, visit www.achieve.org.

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INTRODUCTION

As states and districts transition to college- and career-ready standards and aligned assessments, the need for high-quality instructional materials is clear.[1] Open Educational Resources (OER) offer a low-cost solution with high potential to assist teachers nationwide in helping students meet the demands of higher standards. More and more developers are choosing to publish their instructional materials as OER as an alternative to publishing with a traditional, all rights reserved copyright. In addition to this advantage, OER support the ability of educators to share and modify instructional materials for classroom use. With the advent of common, college- and career-ready standards in the Common Core State Standards (CCSS), educators can seek out, customize or develop high-quality instructional materials and can share those materials with their peers across districts and state borders. The modern classroom incorporates modular instructional materials from myriad sources, and therefore instructional materials and the policies and practices related to those materials should support this new model.[2] The model of one textbook per student in each subject is out of sync with a world where content is available digitally, through an array of methods, to meet the needs of students and teachers in 21st-century classrooms.

However, as with the rest of the marketplace, the demand for materials has led to a flood of new OER instructional materials. The large number of materials presents a daily challenge for educators who are trying to determine the quality and alignment of the materials. It also underscores the importance of policy leaders with shared standards having a shared understanding of what constitutes quality and standards alignment for OER instructional materials, across districts and across states.

This brief sets forth state policy recommendations for providing educator access to college and career-ready OER.

THE BENEFITS OF OER – THE "5 Rs"

Retain — The right to make, own and control copies of the content (e.g., download, duplicate, store and manage)

Revise — Adapt and improve OER so that they better meet your needs.

Remix — Combine or "mash up" OER to produce new materials.

Reuse — Use the originals or your new versions of OER in a wide range of contexts.

Redistribute — Make copies and share original OER or your new versions with others.[4]

OER DEFINED

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 repurposing by others.[3] A common form of licensing for openly licensed instructional resources is the Creative Commons suite of open licenses. OER are a departure from materials that have traditional, all rights reserved licensing, which restricts the revision and sharing of these resources. In addition, OER can take many forms — lesson or unit plans, guides for professional learning, performance tasks, rubrics, and other tools to support teaching and learning.

[1] Scholastic. "Teachers' Views on the Common Core State Standards One Year Later." www.scholastic.com/primarysources/teachers-on-the-common-core.htm.
[2] SETDA. (2012). *Out of Print: Reimagining the K–12 Textbook in a Digital Age.* www.setda.org/priorities/digital-content/out-of-print/.
[3] The William and Flora Hewlett Foundation. *Open Educational Resources.* www.hewlett.org/programs/education/open-educational-resources.
[4] Wiley, David. *Defining the "Open" in Open Content.* http://opencontent.org/definition/.

WHAT ARE THE BENEFITS OF OER?

Many of the benefits of OER, particularly when compared to materials with traditional licensing, can be succinctly covered in what OER advocates call the "Five Rs:"

In addition to these benefits, other advantages of OER include:

- **Increasing local control and allowing teachers to make instructional materials work best for them.** By offering educators the ability to modify materials, resources that teachers use with students can be revised to fit local contexts in classrooms and support personalized learning. OER can be customized to provide additional explanation or practice or to offer additional supports for students with particular needs.

- **Reducing costs of instructional materials.** Open licenses ensure that OER can be shared easily and at very little cost for the materials themselves, even when printed. In Utah, pilot programs were printed and provided to more than 3,800 high school science students at a cost of about $5 per book, compared with the $80 cost of a typical science textbook.[5]

- **Ensuring that high-quality resources are shared broadly and easily.** In an age when schools are shifting to digital resources, the best resources can be shared without infringing upon the copyright restrictions that traditionally licensed materials may have. This includes sharing within a district, across districts and across states.

HOW ARE STATES USING OER?

Since 2012, states have worked together through the Achieve OER Institute. The Institute brought together state leaders from **California, Illinois, Louisiana, Minnesota, North Carolina, Washington** and **Wisconsin** to discuss issues and policy barriers surrounding the use of OER in college- and career-ready standards implementation and to seek out opportunities for cross-state sharing collaboration.

Over two years, each of these states has made strides promoting the use of OER in their respective states. Many states have begun materials review processes that include or are specifically geared toward OER and have begun including OER in professional development programs. Additionally, to help teachers locate quality and aligned materials, many states are building digital libraries of vetted, instructional resources and are using OER as they seek out and vet quality materials. More specific examples, including initiatives from each of these states, will be highlighted as part of the basis for the recommendations provided here.

States across the country have chosen to use OER as part of their college- and career-ready standards implementation plans in a variety of ways. In **Utah**, the Mathematics Vision Project has developed full course materials for Integrated Mathematics in high school. The Partnership for Collaborative Curriculum in **Minnesota** is a group of more than 180 districts that have agreed to provide $1 per student to fund the development of full course OER materials in a variety of subjects. States such as **California, Illinois, North Carolina** and **Wisconsin** are all in various stages of creating processes for vetting OER for quality and standards alignment and sharing them with educators via statewide online portals.

[5] Utah State Office of Education. "Utah State Office of Education to Create Open Textbooks." Press Release. January 25, 2012. www.schools.utah.gov/main/INFORMATION/Online-newsroom/DOCS/01252012OpenTextbook.aspx.

While many curriculum decisions happen at the local level, state education agencies (SEAs) have an opportunity to provide leadership on OER initiatives within their own states and across states. Not only can states perform the actions listed above, but they can also help coordinate OER initiatives in districts — both to track bright spots where OER adoption is occurring and to promote sharing and cross-district collaboration. Additionally, states can help forge collaboration with other states by leveraging opportunities created through shared, college- and career-ready standards.

RECOMMENDATIONS

After working with a group of states on issues related to OER for more than two years, a series of key findings have emerged and were initially shared in Achieve's policy brief *State Support for Open Educational Resources*. Building on this work, the following recommendations detail how each of these can advance the use of OER in states and with teachers in classrooms.

The intent of these recommendations is to help share key strategies from states that have begun using OER as part of the college- and career-ready implementation plans to continue advancement of OER in these states as well as to provide helpful information and guidance for states that have not yet begun an organized effort to use OER in college- and career-ready standards implementation but are interested in doing so. In addition to these recommendations, **Appendix A** of this brief includes casemaking materials for policymakers.

The following OER policy recommendations are centered on two main tenets, which provide a basis and framework for additional recommendations:

- States and districts should use OER as part of their strategies to support the implementation of college- and career-ready standards. Furthermore, when public funds are used, the instructional materials created should have open licenses, such as Creative Commons licenses.
- States and districts should ensure that all instructional materials being used, including OER, are high quality and aligned to college- and career-ready standards.

The additional recommendations below support the integrity of implementing high-quality OER aligned to college- and career-ready standards:

- States should develop strategies for using OER to support college- and career-ready standards implementation. These strategies should include goals and relevant timelines as well as an individual or team of individuals to lead these efforts.
- States and districts should use specific criteria and review processes to measure alignment to the college- and career-ready standards to ensure that OER being used meet the level of quality needed to support teaching to those standards.
- States and districts should use OER to leverage common standards as an opportunity for collaboration in the development, refinement and continuous improvement of OER instructional materials.
- States and districts should include OER in professional learning activities. This professional learning can increase knowledge and awareness of OER and their benefits and bolster the reputation of OER among educators, administrators and other stakeholders as materials that can be of high quality.

Creative Commons has developed a suite of open licenses that can be used for OER. Below are examples of four Creative Commons licenses, including licenses with NonCommercial and ShareAlike designations. These licenses have terms beyond those of the Creative Commons Attribution (CC BY) license. States and districts should license materials with the least restrictive license possible.[9]

Attribution (CC BY): This license allows others to share and modify OER, but they must attribute the original author of the resource.

Attribution-ShareAlike (CC BY-SA): This license lets others share and modify OER, but any new OER created must have the same license terms.

Attribution-NonCommercial (CC BY-NC): This license allows others to share and modify OER but only for noncommercial purposes.

Attribution-NonCommercial-ShareAlike (CC BY-NC-SA): This license lets others share and modify OER but only for noncommercial purposes, and any new OER created must have the same license terms.

States and districts should use OER as part of their strategy to support the implementation of college- and career-ready standards. When public funds are used, the instructional materials should have open licenses, such as Creative Commons licenses.

Two of the key, related benefits of OER in practice for K–12 educators are the ability to tailor resources to specific classrooms and to continuously improve quality. Since educators can easily revise the materials, without the constraints of traditional licensing, they have the ability to improve the resources themselves while using them in the classroom and to share those improvements with others, both within a single school year and across years.

Open licensing of instructional materials **increases local control** for districts and classroom teachers. It is no secret that teachers are often faced with the need to customize materials to support the particular needs of their classrooms, such as additional practice for struggling students or support for English language learners. Open licenses allow educators to make these modifications, and openly licensed, modified materials can in turn be shared again with other teachers. Conversely, teachers cannot make these modifications to traditionally licensed materials and run the risk of violating the copyright of those materials by sharing or editing them.

Recent poll data from the Center on Education Policy show that districts are often turning to materials developed by teachers and other district staff to support implementation of these new standards — more than 80 percent of districts are obtaining or have obtained curricular materials to support CCSS implementation from at least one local source, such as teachers or district staff.[6] As teachers and districts go about developing materials, open licensing can support the **sharing** and **customizing** of these materials across schools, districts and states.

In states and districts where it is applicable, learning resources created with public funds should have open licenses, such as Creative Commons licenses. By ensuring that resources funded publicly are openly licensed, all educators can benefit from and freely share and repurpose these resources, without additional costs. Achieve is joined by other supporters of OER and the Open Access movement in making this recommendation, including both iNACOL (the International Association for K-12 Online Learning) and the Open Policy Network, coordinated by Creative Commons.[7] Furthermore, states and districts developing instructional materials created should have open licenses, such as Creative Commons licenses.[8]

[6] Renter, Diane Stark and Nancy Kober. (2014). *Common Core State Standards in 2014: Curriculum and Professional Development at the District Level.* www.cep-dc.org/displayDocument.cfm?DocumentID=441.

[7] Bliss, TJ and Susan Patrick. (2013). *OER State Policy in K-12 Education: Benefits, Strategies, and Recommendations for Open Access, Open Sharing.* www.inacol.org/cms/wp-content/uploads/2013/06/inacol_OER_Policy_Guide_v5_web.pdf.

[8] More information on this topic is included in a policy brief from SETDA and EdCounsel: www.setda.org/wp-content/uploads/2014/03/SETDA_WPTeacher-Created.final_.5.29.pdf.

[9] More information on Creative Commons licenses is available here: https://creativecommons.org/licenses/.

Finally, when possible, resources should be licensed using the least restrictive open license possible. For example, the Creative Commons Attribution (CC BY) license is the least restrictive, or most "open," license offered by Creative Commons. The more open the license, the easier it is for others to incorporate OER into their own classrooms and modify them, and the easier it is to share modified or remixed works with others.

States and districts should ensure that all instructional materials being used, including OER, are high quality and aligned to college- and career-ready standards.

OER Institute states noted early on that one of the barriers to teachers using OER was a perceived lack of quality.[10] This problem of perception is not an issue for OER alone — all digital and online materials may be met with skepticism by educators more familiar with textbooks and other more traditional instructional resources.

The **quality** and **alignment** to standards of all instructional materials — both traditional and OER — should be appropriately evaluated prior to adoption and implementation. To be effective, states and districts must ensure that OER are at least as good as, if not better than, other traditional instructional materials. This should be a level playing field; the tools and processes used to evaluate the quality of traditional instructional materials should also be applied to OER.

Openness itself is beneficial; however, OER that are of high quality are more likely to be adopted by districts and schools. Only when OER reach the level of quality necessary to meet the demands of new, higher standards will large-scale adoption occur.

Here, high quality means that OER are aligned to college- and career-ready standards and can equip teachers to help all students meet the demands of these higher standards. Certainly, resources are not truly "high quality" until they have been used by teachers in classrooms to support student learning. However, quality for the purposes of these recommendations will be focused on meeting college- and career-ready standards alignment and the ability of OER materials to help improve student achievement.

Additionally, the benefits of using OER can support efforts to ensure quality. OER materials can be modified easily to ensure that these materials address shifts in new, college- and career-ready standards. Training educators on review processes and using tools to measure quality can increase the capacity of educators to seek out quality materials. OER that have been deemed quality and aligned to standards can be further improved by educators after they have been used in the classroom to better support future use with students. Sharing high-quality and aligned materials across schools and districts can also reduce the amount of time educators spend seeking out additional instructional materials.

[10] Achieve. (2013). *State Support for Open Educational Resources: Key Findings from Achieve's OER Institute.* www.achieve.org/files/OERInstitutePolicyBriefFINAL1.pdf.

RECOMMENDATIONS TO SUPPORT IMPLEMENTATION OF HIGH-QUALITY OER

States should develop a strategy for using OER to support college- and career-ready standards implementation. This strategy should include goals and relevant timelines as well as an individual or team of individuals to lead these efforts.

OER initiatives, like other new programs and practices within states, require appropriate planning and strategizing to lead to effective implementation. Like any strong implementation strategy, this should include goals and relevant timelines, reflective of a state's specific context. Strategies should not be separate from other state activities to promote college and career readiness, however, but should instead be embedded into existing implementation plans. As the other recommendations describe, supporting the use of OER requires the input of various experts at different levels within a state and can involve individuals from curriculum, technology, communication and professional learning departments.

As part of the OER Institute, Achieve worked with states in planning activities to help states identify goals and work toward developing a strategy for the use of OER. One activity was the use of an OER Planning Framework, which is posted publicly for other states and districts to use.

Effective communication to local educators and administrators should also be included in a state's OER strategy as a way to increase knowledge and awareness about OER. Achieve has created and released sample presentation slides, key messages about OER, and a survey to gauge knowledge and awareness about OER as well as identify areas where OER is already in use. States and districts are able and encouraged to adapt and modify these communications resources to suit their specific needs.[11]

Advancing the use of OER in a state also requires an individual to serve in a leadership role in advancing this work as well as a team to support this leader. As OER should certainly be included in strategies employed by multiple teams across an SEA, individuals from these different sectors can and should be involved in the advancement of OER in a state.

The individual tasked with taking the lead on OER should serve as both a lead in coordinating and managing OER efforts across a state. iNACOL also recommends appointing a specialist position to lead OER efforts in a state.[12] A key example is the OER program manager in the Washington Office of Superintendent of Public Instruction, whose position is part of Washington's legislatively funded and mandated OER program. Additionally, the basis of the recommendation to establish a cross-organizational team to support OER is included in Achieve's State Support for Open Educational Resources as a key finding; it states that supporting the use of OER requires cooperation and collaboration from experts from multiple sectors.[13] Establishing a team to support the use of OER creates a set of champions within an SEA or throughout a state with different areas of expertise who can serve as a resource for educators and administrators with whom these individuals interact on a day-to-day basis.

States and districts should use specific criteria and review processes to measure alignment to the college- and career-ready standards to ensure that OER being used meet the level of quality needed to support teaching to those standards.

Rubrics and other tools can assist educators and administrators in both the development and evaluation of instructional materials and their alignment to high standards by offering a framework for doing this work and specific criteria to follow. Practices like this are already commonly used to evaluate traditional instructional materials in states such as **Louisiana**, and OER should be under the same level of scrutiny as textbooks and other traditional materials.[14] The purpose of using tools to evaluate alignment is to

[11] These resources are available here: www.acheive.org/oer-rubrics.

[12] Bliss, TJ and Susan Patrick. (2013). *OER State Policy in K–12 Education: Benefits, Strategies, and Recommendations for Open Access, Open Sharing.* www.inacol.org/cms/wp-content/uploads/2013/06/inacol_OER_Policy_Guide_v5_web.pdf.

[13] Achieve. (2013). *State Support for Open Educational Resources: Key Findings from Achieve's OER Institute.* www.achieve.org/files/OERInstitutePolicyBriefFINAL1.pdf.

[14] More information available here: www.louisianabelieves.com/academics/instructional-materials-review.

catalyze the impact that the CCSS can have for students by increasing the number of high-quality instructional materials aligned to the standards.[15] Below are some of the different rubrics available that can be used to evaluate the quality and alignment of different resources to the CCSS and other college- and career-ready standards.

The key difference between each set of rubrics is the intended size or length of evaluated materials as it relates to instructional time. Achieve has published guidance on the ways in which the EQuIP rubrics and OER rubrics can be used, both together and separately, to evaluate instructional materials.[16] Furthermore, both the EQuIP rubrics and the IMET are included within the Materials Alignment Toolkit, developed in partnership with Achieve and the Council of Chief State School Officers.

Additionally, trainings and review processes using these rubrics and tools serve the added benefit of increasing the capacity of state and local educators to conduct additional reviews of the materials being used in classrooms. Achieve's numerous interactions related to these measures of quality with educators and administrators across states and districts strongly support this idea. Using these rubrics and tools, first in training and later in quality reviews, reinforces understanding among educators and administrators about what is required by CCR standards and how that can be reflected in OER instructional materials.

States and districts across the country are using these tools to evaluate the alignment of instructional materials to the CCSS. As part of a request for proposal (RFP) process to procure CCSS-aligned curricular resources, **New York** included in its RFP that resources developed with these funds would be evaluated using the Tri-State Rubric, which is a version of the EQuIP rubric. By including this, the RFP made clear to the developers and evaluators of material in New York the criteria by which these materials would be evaluated to measure alignment. Additionally, the RFP required that these materials would be licensed with a Creative Commons NonCommerical-ShareAlike license. These OER are available at the EngageNY website.

TOOLS TO EVALUATE THE QUALITY AND ALIGNMENT OF INSTRUCTIONAL MATERIALS

EQuIP Rubrics: This set of rubrics for mathematics and English language arts (ELA)/literacy resources is intended to evaluate the quality and alignment to the CCSS of lesson- and unit-length materials. The dimensions of the rubrics measure alignment to CCSS standards, key shifts in the CCSS, instructional supports, and assessments in lessons and units. For more information, visit www.achieve.org/equip.

Instructional Materials Alignment Tool (IMET): The IMET is a tool for evaluating a full textbook or set of textbooks for alignment to the shifts and major features of the CCSS in mathematics and ELA/literacy. This tool can be used to inform purchasing decisions, evaluate previously purchased materials and build understanding of what aligned materials look like. For more information, visit http://achievethecore.org/page/783/instructional-materials-evaluation-tool-imet.

OER Rubrics: Achieve developed eight rubrics in collaboration with leaders from the OER community to evaluate the quality and alignment of OER, which can range from a single task or activity to resources for a full course. These rubrics include Degree of Alignment to Standards, Quality of Explanation of the Subject Matter, Quality of Technological Interactivity, and Quality of Instructional Tasks and Practice Exercises. For more information, visit www.achieve.org/oer-rubrics.

[15] Achieve, The Council of Chief State School Officers and Student Achievement Partners. (2014). *Toolkit for Evaluating the Alignment of Instructional and Assessment Materials to the Common Core State Standards.* www.achieve.org/toolkit.

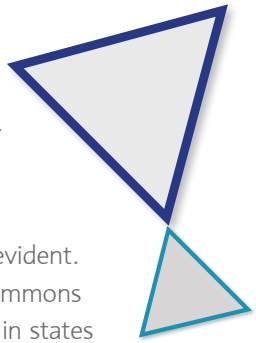
[16] Guidance document is available here: www.acheive.org/oer-rubrics.

States and districts should use OER to leverage common standards as an opportunity for collaboration in the development, refinement and continuous improvement of OER instructional materials.

Because OER can be shared, modified and improved, they provide opportunities for educators to collaborate in the development and revision of these materials to support their own classrooms. This type of collaboration and refinement can occur within a school, across districts or across states. Discussions among educators about instructional materials and their refinement can serve to improve the materials themselves and how they are used in classrooms by leveraging the expertise of multiple educators.

Another quality unique to OER materials is the ability for these materials to be continuously improved by single educators or groups of educators. The adaptable nature of OER can facilitate the creation of feedback loops about OER over the course of a school year, either in real time while materials are being used or at the conclusion of a year as educators prepare for another school year with new students. While the ability to create multiple iterations of an OER is itself a benefit, that does not exclude modified OER from the need to ensure quality and college- and career-ready standards alignment through the use of rubrics or other tools, as described in previous recommendations.

OER can also support collaboration among educators at a larger scale. Common educational standards and open licensing are two relatively new innovations that have the ability to go hand in hand. The opportunity for states to share instructional materials and other resources across state borders is aided both by having common academic standards, to which instructional resources should be aligned, and by resources that can be shared freely without traditional copyright restrictions.



The utility of OER in providing solutions for high-quality, aligned instructional materials across states is evident. As previously stated, in **New York** the EngageNY curricular resources were required to have Creative Commons licenses during the development process. These resources are now being accessed outside of New York in states across the country and have been downloaded more than 18 million times in New York state and elsewhere.[17] The need for high-quality resources is clear, and OER that meet this bar provide solutions that need not be specific to a single state.

CPALMS is an online toolbox of resources committed to developing high quality and aligned OER for teachers. The group overseeing this work, based in **Florida**, has a focus on continuous improvement and collaboration among educators across districts. Educator-developed lessons and units are vetted using quality and alignment criteria, with a focus on feedback provided from other educators to improve developed OER. CPALMS also provides training to local education agencies via its website and related tools and processes.

A notable example of cross-state collaboration on OER is the K-12 OER Collaborative, a group of states that recently launched an RFP to create comprehensive, high-quality OER aligned with CCR standards in grades K–12 for mathematics and ELA/literacy. Educators from the states involved will evaluate materials created by selected groups that respond to the RFP using the EQuIP rubrics and the IMET.

[17] Data gathered as of December 2014 from University of the State of New York Regents Research Fund.
[18] Achieve. (2013). *State Support for Open Educational Resources: Key Findings from Achieve's OER Institute.* www.achieve.org/files/OERInstitutePolicyBriefFINAL1.pdf.

States and districts should include OER in professional learning activities. This professional learning can increase knowledge and awareness of OER and their benefits and can bolster the reputation of OER among educators, administrators and other stakeholders as materials that can be of high quality.

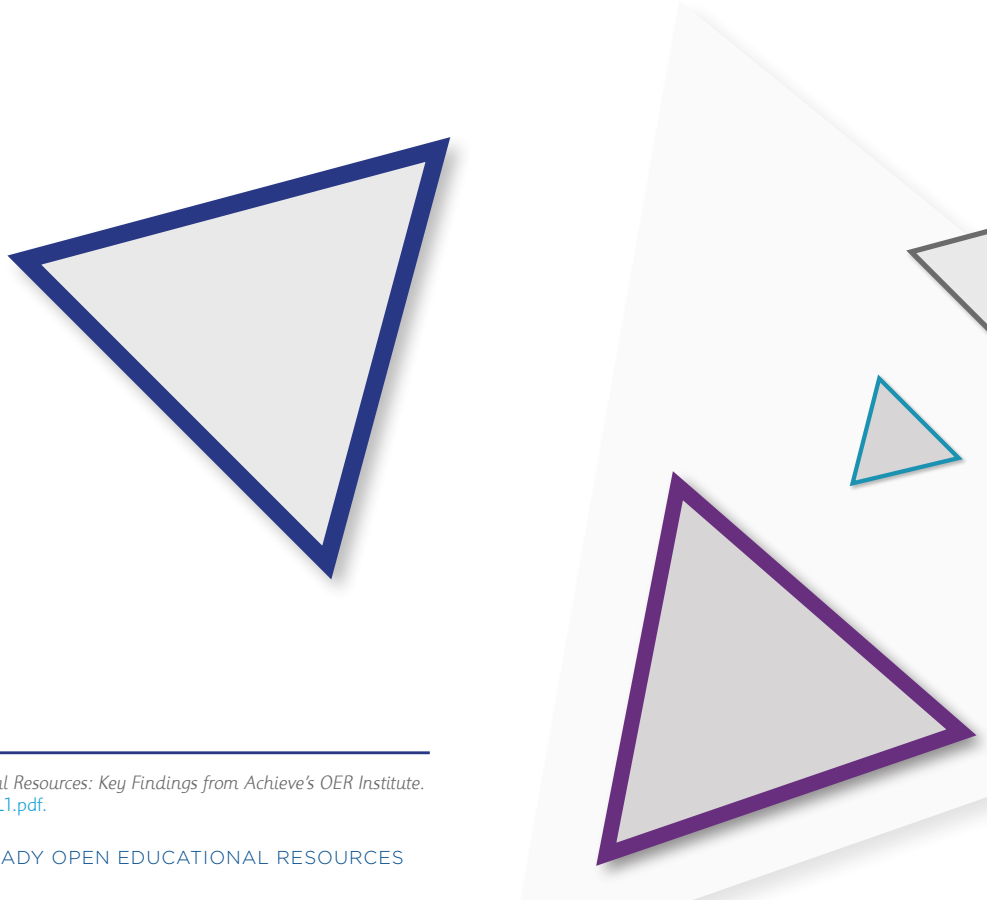
As a particularly new advancement in the world of instructional materials, OER are still very new to many educators, administrators and policymakers. Lack of knowledge and awareness about OER and copyright instructional material is another challenge to using and implementing openly licensed resources in classrooms.[18]

Concerted efforts to include OER as part of existing professional development programs can also be a method to support adoption among districts. When educators and administrators know more about OER; the benefits of OER; and examples of high quality, aligned OER, adoption among districts and classroom teachers can and should increase.

As previously stated, discussions about OER instructional materials among educators can serve to improve the materials themselves. Moreover, OER discovery and evaluation, and discussion among teachers about the quality of instructional materials, can promote professional learning about both quality instruction and aligning materials and instruction to CCR standards.

The state of **Minnesota**, as part of its Minnesota Learning Commons project, has begun hosting educators across K–12 and higher education in workshops aimed at seeking out quality OER. This work, called the OER Roadmapping project, includes the use of a hub for resources created by this group on OER Commons, an online library of OER.

Additionally, the state of **Washington** has conducted a series of OER Days as part of its OER initiatives, which include the evaluation of full-course and unit-length OER. These OER Days, attended by local educators and administrators from across the state, are conducted in different locations throughout the state and offer information on open licensing and the benefits of OER.



[18] Achieve. (2013). *State Support for Open Educational Resources: Key Findings from Achieve's OER Institute.* www.achieve.org/files/OERInstitutePolicyBriefFINAL1.pdf.

CONCLUSION

Each state must consider its own context in considering the best ways to advance OER initiatives. Some of the recommendations provided here may be more relevant or salient for a particular state, region or district, given specific state contexts. However, the two main recommendations that provide framing for these recommendations — that OER should be quality and aligned to CCR standards and that publicly funded resources should be openly licensed — are recommendations that any state should embrace in promoting the use of OER in classrooms.

As innovations continue and more OER are adopted and used in schools, states will face challenges in continuing to support the use of OER in the future. To fully realize the opportunities provided by openly licensed resources aligned to common standards, easily sharing digital resources and OER metadata across states will be key. Nearly every state has a local control policy when it comes to the adoption of instructional materials. Therefore, states may explore strategies such as explaining the benefits of OER, highlighting quality examples of OER for districts, and providing guidance on the use of OER for teachers and administrators. Many states are now working on this emerging topic, and useful strategies should be identified and shared broadly across states. Finally, models for the sustainability of OER must be developed and shared, both for financial reasons and for the continuous improvement of materials. Continuous improvement of instructional materials is a new model that can be used to ensure that resources used in classrooms are relevant, are up to date and represent best instructional practices. Methods for continuously improving OER are still being explored, and ways to support these efforts financially are also being developed and piloted.

While the recommendations here provide a basis for states that have already begun to support the use of OER and for states that are beginning to explore OER as an option, work must still be done as states and districts seek to take on these challenges. New recommendations and strategies will emerge as OER are put into use more broadly in states and districts.

APPENDIX A: THE CASE FOR OER — A GUIDE FOR POLICYMAKERS

As states and districts transition to new, higher standards and aligned assessments, the need for high-quality instructional materials is clear. One of the key challenges to implementing these new standards is the need for high-quality instructional materials. Unfortunately, gaps persist among instructional materials currently available to educators from a variety of sources, and teachers are struggling to find resources that will help students work toward college and career readiness.

Open Educational Resources (OER) offer a low-cost solution with high potential to assist teachers nationwide in helping students meet the demands of higher standards. 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 repurposing by others.[19]

Some of the benefits of OER when compared to instructional materials with traditional, all rights reserved copyright licenses include:

- **Increasing local control and allowing teachers to make instructional materials work best for them.** By offering educators the ability to modify materials, resources that teachers use with students can be revised to fit local contexts in classrooms and support personalized learning. OER can be customized to provide additional explanation or practice or to offer additional supports for students with particular needs.
- **Reducing costs of instructional materials.** Open licenses ensure that OER can be shared easily and at very little cost for the materials themselves, even when printed. In Utah, pilot programs were printed and provided to more than 3,800 high school science students at a cost of about $5 per book, compared with the $80 cost of a typical science textbook.[20]
- **Ensuring that high-quality resources are shared broadly and easily.** In an age when schools are shifting to digital resources, the best resources can be shared without infringing upon the copyright restrictions that traditionally licensed materials may have. This includes sharing within a district, across districts and across states.

After working with a group of states on issues related to OER for more than two years, Achieve has developed the following recommendations for states to help share key strategies from states that have begun using OER as part of the college- and career-ready implementation plans to continue advancement of OER in these states as well as to provide helpful information and guidance for states that are interested but have not yet begun an organized effort to use OER in college- and career-ready standards implementation.

[19] The William and Flora Hewlett Foundation. *Open Educational Resources.* www.hewlett.org/programs/education/open-educational-resources.

[20] Utah State Office of Education. "Utah State Office of Education to Create Open Textbooks." Press Release. January 25, 2012. www.schools.utah.gov/main/INFORMATION/Online-newsroom/DOCS/01252012OpenTextbook.aspx.

The following OER policy recommendations are centered on two main tenets, which provide a basis and framework for additional recommendations:

- States and districts should use OER as part of their strategies to support the implementation of college- and career-ready standards. Furthermore, when public funds are used, the instructional materials created should have open licenses, such as Creative Commons licenses.
- States and districts should ensure that all instructional materials being used, including OER, are high quality and aligned to college- and career-ready standards.

The additional recommendations below support the integrity of implementing high-quality OER aligned to college- and career-ready standards:

- States should develop strategies for using OER to support college- and career-ready standards implementation. These strategies should include goals and relevant timelines as well as an individual or team of individuals to lead these efforts.
- States and districts should use specific criteria and review processes to measure alignment to the college- and career-ready standards to ensure that OER being used meet the level of quality needed to support teaching to those standards.
- States and districts should use OER to leverage common standards as an opportunity for collaboration in the development, refinement and continuous improvement of OER instructional materials.
- States and districts should include OER in professional learning activities. This professional learning can increase knowledge and awareness of OER and their benefits and bolster the reputation of OER among educators, administrators and other stakeholders as materials that can be of high quality.

ACTIONS FOR STATE EDUCATION AGENCIES

Many actions are available to state education agency (SEA) staff and leadership to support the use of OER in classrooms. Through our work with states, Achieve has found that SEAs often have the ability to take on leadership roles in promoting OER and championing their use. Some examples of actions SEAs can take include:

- Communicating the benefits of OER to local educators and administrators to increase awareness and support adoption.
- Providing guidance to districts on quality implementation of OER in classrooms.
- Facilitating professional learning across districts through the use of OER, such as programs where educators evaluate the quality and standards alignment of OER, or modify OER to specific classroom contexts.

ACTIONS FOR STATE LEGISLATORS

To date, examples of OER-focused legislation for K–12 education are not numerous. In **Washington**, the state legislature voted to fund the development of a library of CCSS-aligned OER.[21] Through the funding provided in this bill, Washington has hired a full-time OER program manager and has chosen to annually review full-course and unit-length OER materials for their quality and alignment to the Common Core State Standards. Other actions that legislators can make include:

- Shifting funds from other instructional materials budget items toward the development of new OER or the modification of existing OER.
- Ensuring that professional learning programs in the state include the use of OER.

ACTIONS FOR STATE BOARD OF EDUCATION MEMBERS

In **Utah**, the State Board of Education approved an administrative rule explicitly allowing for open licensing of materials created by state employees using public funds and giving copyright ownership to the creators of those materials.[22] Additional actions for State Board of Education members include:

- Including OER in state evaluations of instructional materials.
- Providing information about the benefits of OER to state educators and administrators.

[21] Regarding Open Educational Resources in K-12 Education, H.B. 2337, 2012.
[21] Sharing of Curriculum by Public School Educators, R277-111, 2009.

APPENDIX B: RELATED RESOURCES

Achieve. *Rubrics for Evaluating Open Education Resource (OER) Objects.* www.achieve.org/files/AchieveOERRubrics.pdf.

Achieve. *Educators Evaluating Instructional Products (EQuIP) Rubrics.* www.achieve.org/equip.

Achieve. (2013). *State Support for Open Educational Resources: Key Findings from Achieve's OER Institute.* www.achieve.org/files/OERInstitutePolicyBriefFINAL1.pdf.

Achieve, The Council of Chief State School Officers and Student Achievement Partners. (2014). *Toolkit for Evaluating the Alignment of Instructional and Assessment Materials to the Common Core State Standards.* www.achieve.org/toolkit.

Bliss, TJ and Susan Patrick. (2013). *OER State Policy in K-12 Education: Benefits, Strategies, and Recommendations for Open Access, Open Sharing.* www.inacol.org/cms/wp-content/uploads/2013/06/inacol_OER_Policy_Guide_v5_web.pdf.

Bliss, TJ, DeLaina Tonks and Susan Patrick. (2013). *Open Educational Resources and Collaborative Content Development: A Practical Guide for State and School Leaders.* www.inacol.org/cms/wp-content/uploads/2013/06/inacol_OER_Collaborative_Guide_v5_web.pdf.

Council of Chief State School Officers. (2014). *State of the States: Open Educational Resources in K-12 Education.* www.ccsso.org/Resources/Digital_Resources/State_of_the_States_Open_Educational_Resources_in_K-12_Education.html.

SETDA. (2012). *Out of Print: Reimagining the K-12 Textbook in a Digital Age.* www.setda.org/priorities/digital-content/out-of-print/.

SETDA. State Education Policy Center (SEPC) database. http://sepc.setda.org/.

SETDA and EdCounsel. (2014). *Clarifying Ownership of Teacher-Created Digital Content Empowers Educators to Personalize Education, Address Individual Student Needs.* www.setda.org/wp-content/uploads/2014/03/SETDA_WPTeacher-Created.final_.5.29.pdf.

Wiley, David and Cable Green. (2012). *Why Openness in Education? Game Changers: Education and Information Technologies.* Educause. http://net.educause.edu/ir/library/pdf/pub7203.pdf.

Wiley, David, Cable Green, and Louis Soares. (2012). *Dramatically Bringing Down the Cost of Education with OER.* Center for American Progress and Educause. http://cdn.americanprogress.org/wp-content/uploads/issues/2012/02/pdf/open_education_resources.pdf.

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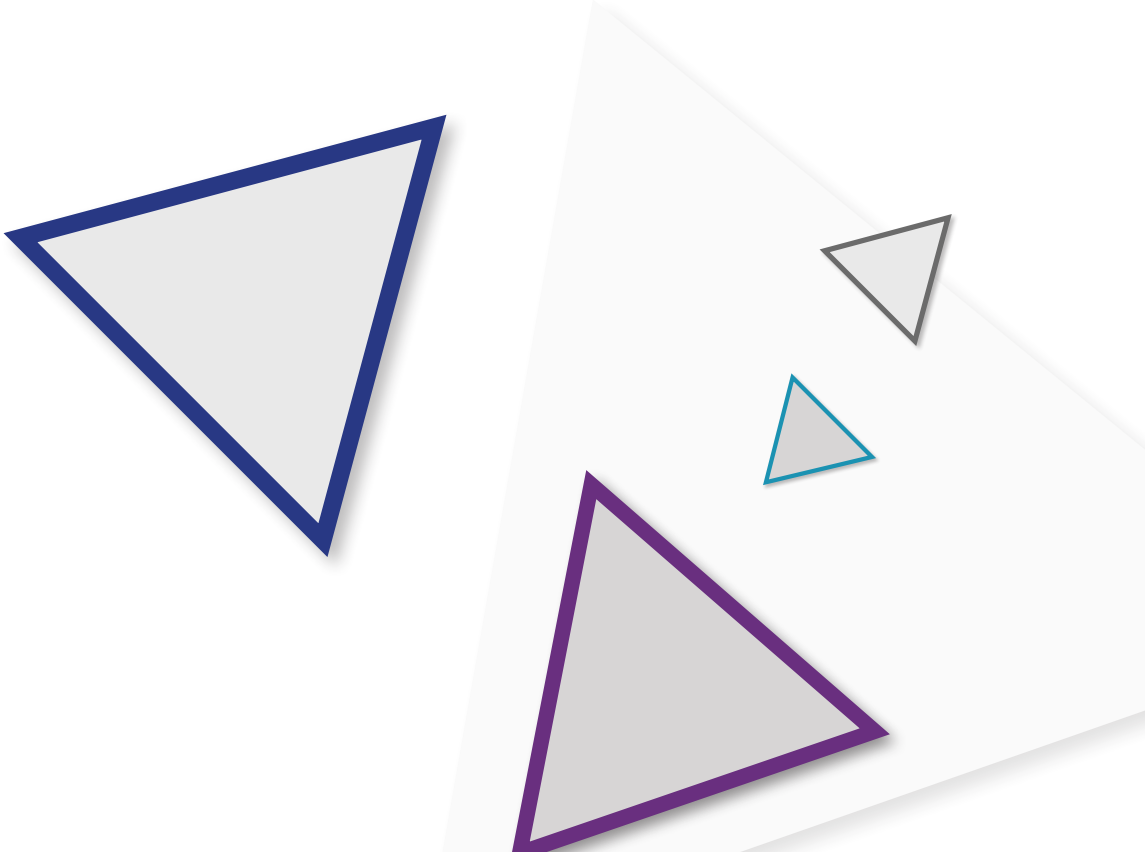

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