

Ensuring the Quality of Digital Content for Learning *Recommendations for K12 Education*

SETDA Policy Brief, prepared in partnership with Foresight Law + Policy

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Context and Overview

In the fall of 2012, SETDA released a groundbreaking report, *Out of Print: Reimagining the K-12 Textbook in a Digital Age*, which provided initial advice to states and districts about managing the shift from traditional print-based instructional materials to digital content. While the advantages to increasing the use of digital content by students and teachers are significant, the policies and practices associated with navigating a successful digital transition are still emerging and evolving. Recognizing this challenge, SETDA recently published two issue briefs, building on *Out of Print's* recommendations, to assist states in identifying and implementing additional policies and practices for keeping the digital content transition on track and on target. The two initial briefs focused on using digital content to enhance [accessibility](#) for students with unique needs, and clarifying the [ownership](#) of teacher-created digital content.

This paper complements SETDA's prior digital transition policy briefs by examining strategies for ensuring digital content quality, including exploration of the specific quality-control challenges and opportunities associated with open educational resources (OER). Specifically, this paper describes: 1) digital content's unique characteristics; 2) traditional state/district instructional materials quality-review practices; and 3) recommendations to inform/strengthen state strategies for ensuring digital resource quality.

Digital Content's Unique Characteristics and the Future of Content Quality Control

Recent advancements in technology have been breathtaking, as reflected by the plethora of powerful and innovative digital devices and tools in our homes, workplaces, and communities. Recognizing technology's potential to improve educational outcomes, even as technology use in schools has lagged behind other sectors, is key to innovative learning. Educators understand that the use of digital content and devices to enhance educational opportunities benefit K-12 students. Federal, state, and school district leaders are beginning to refine their [policies](#) and practices with the goal of providing faster and more widely distributed digital technology to K-12 students to improve teaching and learning. This technical educational transformation includes a still nascent, but growing, use of digital content and open educational resources (OER), which hold immense promise for providing a significantly greater number of educators and students with the innovative learning tools needed to meet a state's rigorous college- and career-ready standards. OER, in particular, provide a unique and cost-effective pathway for equipping all students with high-quality, up-to-date, and customizable content and tools.

What are Open Educational Resources (OER)?

OER are "teaching and learning materials licensed in such a way that they are free and may be used, reused, remixed, and otherwise customized to meet specific needs." In other words, OER are teaching, learning, and resource materials, tools, and media that are in the public domain or are available under an open license so that they may be used and repurposed freely by educators, students, and self-learners.

OER items can range from a single lesson or instructional support material to a complete unit or full-course materials; they include e-textbooks, videos, rubrics, assessments, and any other tools that support teaching and learning.

*See SETDA, *Out of Print: Reimagining the K-12 Textbook in a Digital Age* (2012), available at <http://setda.org/priorities/digital-content/out-of-print/>

Digital materials provide many teaching and learning benefits to educators and students. They can be updated more quickly than traditional print materials, may be adapted to address students' learning differences and styles (with an appropriate license), and can offer interactive functions that pique student interests. These advantages are particularly true of digital OER, which offer a lawful pathway for tailoring and adapting content to meet a student's unique learning needs.

Digital content provides significant instructional and practical advantages; however, many districts and schools navigating to digital environments often face implementation challenges and important policy questions. Perhaps most significantly, many states and districts are unsure how to best ensure the quality and accuracy of digital materials, without sacrificing the powerful flexibility and differentiation they offer to teachers and students. This uncertainty often creates a significant hurdle for digital implementation, including slow decision-making, because school, district, and state leaders do not want to inadvertently compromise the quality of content in their classrooms.

Therefore, ensuring digital content quality—including building confidence in the materials among stakeholders—is an important critical step in more swiftly giving students access to the best possible resources for supporting and advancing their learning. As digital content, including OER, rapidly becomes more common, educators and other stakeholders must develop policies on how to select, judge, use, and refine materials over time. It is incumbent on state and district leaders to adopt and implement new policy frameworks for ensuring that only high-quality digital learning materials will be used in schools, classrooms, and all other places where students learn. Achieving this goal will require a thoughtful policy design process that incorporates relevant elements of existing quality assurance policies and practices (i.e., those best practices that apply in both the paper and digital worlds) and merges them with new approaches aligned to the digital environment.

With this goal in mind, state and local efforts to ensure digital content quality should begin by asking:

- How can new quality assurance approaches be designed to reflect digital content's unique characteristics and advantages, without losing existing best practices?
- Who will be responsible for overseeing new approaches to ensure quality and for building capacity to deliver it?

The policy recommendations provided later in this paper further explore these two areas. Prior to turning to these specific recommendations, however, we believe it is instructive to reflect on the characteristics of existing (print focused) quality assurance systems. Some elements of quality assurance systems for print align well with the digital transition and should be continued, while others should be abandoned or significantly modified.

Traditional Systems for Ensuring the Quality of Instructional Materials and Why Digital Demands a Different Approach

This section provides a high-level overview of typical state and district models for evaluating traditional print materials, and then examines why ensuring the quality of digital materials, and promoting their development and use, requires a modified approach.

Full Course Content vs. Supplemental Materials

In general, existing processes ensure that instructional materials are of quality. They aim to provide educators with confidence that the content they use aligns to state standards, is accurate, and promotes student success. Instructional materials, whether in traditional or digital form, include: 1) full-course content (such as textbooks); and 2) supplemental materials that complement full-course resources.

Under existing quality-review systems for print materials, the rigor of review differs between these two classes of materials. Formal, rigorous state-level reviews typically focus on core—full-course materials for certain academic subjects because the material represents the core learning resource relied on by educators and students, and because acquisition of the material usually involves a very large state or district investment. At the other end of the spectrum, single lessons, units, and other supplemental materials are not typically subject to a formal review process (in part because they are usually provided for free with core content). Although supplemental materials are not typically rigorously reviewed, many quality considerations currently apply to both full-course content and supplemental materials (e.g., all materials should be free of error, aligned to state standards, and be free from bias).

The digital transition is beginning to blur the distinction between these types of materials. For example, the expected lower costs associated with updating digital full-course materials could diminish some of the fiscal risks associated with exchanging a rigorous front loaded content review process for a balanced system that is more reliant on classroom evaluations. That change, however, does not diminish the importance of ensuring that both types of content are high quality when they are acquired and, especially in the case of OER, as they are adapted and tailored to meet specific student and classroom needs.

State vs. District Role in Adoption and Quality Assurance

State approaches to assessing full-course print resources typically differ. Some state laws provide no state review function and instill in local districts the full control of their instructional materials adoption.¹ Other states vet and approve instructional materials at the state level and employ either mandatory or advisory approaches for district adoption. For example, in Alabama, a mandatory adoption state, districts must select textbooks from the list of state-approved materials.² Florida employs a hybrid approach, allowing districts to spend up to 50% of their instructional materials allocation on non-state-adopted material.³ A growing number of states use advisory approaches, in which they vet and approve materials but ultimately defer to local decision-making, given different contexts and needs. Indiana, for example, shifted from promulgating a mandatory list of textbooks from which districts had to choose, to an advisory approach. Indiana continues to offer districts the resources and results of a full state review, with guidance on the alignment of certain materials to state standards, but permits districts the autonomy to select a textbook not on the state list.⁴

State-level, institutionalized content assurance systems can enable greater continuity for student educational experiences across the state and also provide cost savings to districts, which can rely on state-led reviews. Policies and best practices for ensuring digital content quality, however, need not be defined exclusively at the state level, but instead may be appropriately integrated into whatever model (state, district, or hybrid) a particular jurisdiction elects to implement.

Key Elements of Traditional Systems for Ensuring Content Quality

Traditional approaches for assuring the quality of print textbooks and other full-course instructional materials typically involve significant work over many months, using a variety of established standards and measures, with formal systems of peer review and expert assessment. Such systems often include the following overarching steps (in order):

- **Establish Adoption Cycle:** The State Board of Education, or designated entity, creates an adoption cycle for subjects in the state's core curriculum to ensure that they are reviewed periodically (usually over a defined period of years).
- **State Proclamation/Call for New Materials:** The State Board of Education, or designated entity, publishes a request for standards-aligned, accurate materials in a given subject and grade level (with given specifications, including for example, accessibility requirements).
- **Bidders Conference:** Interested parties convene for a question and answer session about the proclamation's focus and requirements.
- **Initial Materials Development and Submission:** Publishers create materials consistent with the proclamation's requirements and submit them to the state agency.
- **Expert Panel Review:** The state agency identifies expert educators from across the state in the relevant subject area at issue in the proclamation to serve on a review committee. They analyze the material for alignment to state standards and identify factual errors. After an initial period of independent review, experts are convened to make consensus decisions about whether the content meets the state's needs or falls short in certain areas, and to identify further questions for the publishers.

1 See e.g. ARIZ. REV. STAT. ANN. § 15-721.

2 ALA. CODE § 16-36-62.

3 FLA. STAT. § 1006.40(3)(b)). See also Fl. Dep't of Educ., *2013 Policies and Procedures for the Florida Instructional Materials Adoption*, available at http://www.leg.state.fl.us/STATUTES/index.cfm?App_mode=Display_Statute&Search_String=&URL=1000-1099/1006/Sections/1006.40.html (last accessed Aug. 22, 2014)

4 IND. CODE § 20-2612-1; see also Ind. Dep't of Educ., *Frequently Asked Questions Regarding New State Textbook Adoption Procedures, Textbook Rental Fees, and 1:1 Device Initiatives* (June 21, 2012), available at <http://doe.in.gov/sites/default/files/curriculum/textbook-faq-6-21-2012.pdf> (last accessed Aug. 22, 2014); Memorandum from Ind. Dep't of Educ. to Superintendents, Principals, Textbook Adoption Coordinators (Feb. 8, 2012), available at <http://doe.in.gov/sites/default/files/curriculum/textbook-memo-021312-1.pdf> (last accessed Aug. 22, 2014).

- Publishers' Response and Committee Recommendation: Publishers respond to the review committee's questions and requirements. If the committee accepts the publisher's response, it will recommend that the State Board of Education or relevant authority put the material on the state approved content list.
- Public Comment and State Board of Education Action: The State Board considers the committee's recommendation, including inviting public input, and then adopts or rejects the content.

This approach, and the quality assurance process timeline, varies somewhat state-by-state, but this model's core elements appear in most jurisdictions. The Florida Department of Education, Office of Instructional Materials (FDE), for example, leads the review of instructional materials for individual subjects and grade levels to ensure that materials comply with state curricular requirements.⁵ FDE invites standards aligned content from vendors, which is then reviewed online by two national or state level experts. In the event of a tie, a third expert will review the content. Superintendents are then asked to supply a district expert to rate two or three of the materials on the instructional usability of the resources. The review is then open to the public for their comments. Materials are ultimately adopted or rejected by the Commissioner of Education. Florida rotates subject areas over the course of a five-year period; once a review and assurance cycle is complete, traditional print materials typically are not modified until the next cycle, though there is a substitution policy in place where a publisher may request substitution of materials after the first six months of the adoption. Florida's adoption priorities (for illustration) follow in the table below.

Florida Textbook Adoption Priorities¹ The following are some, but not all, of the criteria included within each of Florida's three priorities for the evaluation of instructional materials.		
Content <ul style="list-style-type: none"> • Alignment with curricular requirements • Level of complexity • Accuracy • Currentness • Authenticity (life connections, interdisciplinary treatment) • Multicultural representation 	Presentation <ul style="list-style-type: none"> • Comprehensiveness (teacher resources) • Alignment of components • Organization of materials • Readability • Pacing of content • Ease of materials use 	Learning <ul style="list-style-type: none"> • Motivational strategies (challenge, relevant) • Teaching a few "big ideas" • Explicit instruction (clarity of direction and explanations) • Guidance and support • Active student participation • Targeted instructional and assessment strategies

What Attributes Make Digital Content Distinct from Print Materials?

In contrast to traditional textbooks and other print materials, digital materials may be modified and refined much more easily, enabling adjustments to address local needs and to ensure relevance and accuracy over time, with no need to consider the costs of a new round of printing.⁶ These attributes lower the quality assurance process's stakes because problems may be addressed quickly (e.g., without waiting for a multi-year print cycle) and at lower cost (e.g., digital materials only need to be republished electronically, not physically reprinted). In addition, digital materials create opportunities for meaningful evaluation of the content's performance in the classroom (e.g., through feedback loops from educators), followed by timely improvement, adjustment, and review before students encounter the new materials. Finally, digital OER's unique intellectual property characteristics require somewhat different quality assurance strategies, including a greater focus on building educators' and school leaders' capacity to skillfully adapt, develop, and judge the quality of digital resources. These intellectual property characteristics permit content modification and refinement to be undertaken by multiple users, such as teachers and students, during the periods between regular approvals by state or district officials.

Given these attributes, digital materials built via collaboration, co-creation, and continuous refinement necessitate a different approach to quality assessment compared to the kind of multiple-month, once-every-five-year cycle often employed for print textbooks. Systems for ensuring the quality of digital materials, including OER, must be more fluid and flexible,

5 FLA. STAT. §§ 1006.31-1006.36. See also Fla. Dep't of Educ., *Priorities for Evaluating Instructional Materials: Research Update* <http://www.cimes.fsu.edu/index.cfm?fuseaction=features.view&featureID=14> (Florida Dep't of Education, 2008), available at (last accessed Aug. 18, 2014).

6 Of course, even with respect to static instructional materials like textbooks, teachers and other educators long have enhanced these resources in real time with personalized modifications and supplements, though these adaptations may not always comply with traditional copyright frameworks.

reflecting the continual nature of the materials' development, refinement, and improvement. And because digital content can be edited (if licensed appropriately) and revised incrementally over time at low (or no) cost, states can adjust time-intensive traditional systems without compromising quality. This adjustment could include exchanging front-end heavy traditional quality assurance models with more balanced systems that rely more heavily on ongoing evaluation of the content's performance in the classroom, supplemented by robust systems for building the capacity of educators, school leaders, and students to recognize and support quality assurance.

At the same time, the quality standards employed to assess instructional materials should not differ based on whether a resource is print or digital. Indeed, digital materials can be assessed using many of the same quality indicators and metrics that states and districts have used for print content.

For example, Florida's state-level reviews of instructional materials focus on three priorities: content, presentation, and learning. As the table above illustrates, the criteria employed by Florida for each of these three priorities would likely be relevant for the assessment of any instructional resource or tool, including those licensed as OER. Given this context, states might choose to continue using some existing print quality-assurance tools (e.g., rubrics) to evaluate digital materials.

States and districts might also look to evaluative instruments developed specifically for the review of OER, but which apply to all types of digital and print resources. For example, Achieve developed eight OER rubrics that evaluate OER quality aspects, including rubrics focused on alignment to standards, utility of materials designed to support teaching, and assurance of accessibility.⁷ Rubrics to assess OER also have been developed at Temoa, an open educational resources portal associated with Mexico's Tecnológico de Monterrey.⁸ Other quality assurance instruments increasingly may be found on online collaborative websites—with the rubrics themselves being OER tools. In addition, the State Instructional Materials Review Association (SIMRA) compiles a number of rubric tools, including some developed for use with OER.⁹ The following exhibit outlines major focuses of certain available rubrics for assessing OER.

Quality Assessment Criteria of Sample OER Rubrics	
Achieve	Temoa
<ul style="list-style-type: none"> - Degree of alignment to standards - Quality of explanation of the subject matter - Utility of materials designed to support teaching - Quality of assessment - Quality of technological interactivity - Quality of instructional and practice exercises - Assurance of accessibility 	<ul style="list-style-type: none"> - Content quality - Motivation - Presentation design - Usability - Accessibility - Educational value - Overall rating

These rubrics alone, however, are not sufficient to ensure digital content's quality. The following sections describe additional steps states should consider when updating their content assurances processes for digital content.

7 Achieve, Open Educational Resources, available at <http://achieve.org/oer-rubrics> (last accessed Aug. 22, 2014).

8 Temoa, *Rubrics to Evaluate Open Educational Resources* (OER) (Feb. 15, 2011), available at http://www.temoa.info/sites/default/files/OER_Rubrics.pdf (last accessed Aug. 24, 2014).

9 State Instructional Materials Review Association, *Documents*, available at <http://simra.us/wp/references/documents/> (last accessed Sept. 8, 2014).

Policy Recommendations: Ensuring the Quality of Digital Materials

Every state needs a modern—more innovative—framework for evaluating digital instructional materials. These new frameworks should acknowledge digital content’s unique characteristics. Traditional approaches to ensuring content quality, with the evaluation of pristine, untouched print materials examined before long-term use by educators and students, and major investments in printing, must be re-examined. A more valuable process might involve less onerous initial state or district screening of digital materials complemented by ongoing opportunities to receive feedback from the classroom and the field on how the materials work (or do not work), including assessing student learning outcomes connected to the content’s use. Such a process should also include a focus on building educator, school leader, and student capacity to recognize and ensure quality, particularly with regard to the growing use of digital OER. With this high-level vision in mind, this paper makes five core recommendations for state and districts to consider when updating their processes for ensuring the quality of digital resources.

- 1. Establish a clear vision statement to promote and guide digital content development, review, and use, grounded in an unwavering commitment to quality, accuracy, and accessibility, including alignment to college- and career-ready standards. Communicate that vision to all stakeholders.**
- 2. Designate experienced state and district leaders to lead quality assurance policy development and oversight, and also empower practitioners, such as curriculum experts, professional learning specialists, content experts, technology leaders and other stakeholders involved with supporting implementation strategies for ensuring digital materials quality. This step must include investing in stakeholders’ capacity—at all levels—to execute the state or district’s digital content quality assurance strategy, including establishing classroom evaluation and performance templates/protocols, complemented by feedback loops designed to lead to timely content improvements and updates.**
- 3. Provide guidance describing the characteristics of well-balanced quality assurance systems for digital content, including OER, such as developing and acknowledging tools and uniform state or local indicators and standards, and advancing an inclusive, not exclusive, approach to quality review.**
- 4. Support educator preparation and professional learning opportunities focused on building the educator’s capacity to assess digital material’s quality, including assessing the initial and ongoing quality of OER, which should evolve and improve over time.**
- 5. Ensure sufficient financial resources to establish and sustain an effective system of quality assessment of digital materials, including OER.**

Policy Recommendations

As digital content nears the tipping point into mainstream adoption and use,¹⁰ states and districts must plan for and invest in updated and improved systems for the quality assessment of instructional materials and that support the development and use of OER. To support these efforts, this section further explores the five recommendations outlined above.

- 1. Establish a clear vision statement to promote and guide digital content development, review, and use, grounded in an unwavering commitment to quality, accuracy, and accessibility, including alignment to college- and career-ready standards. Communicate that vision to all stakeholders.**

State and district leaders should adopt a public strategy for the development, review, and use of quality digital materials in classrooms and should communicate that vision to educators, school leaders, students, content-creators, and other stakeholders, emphasizing digital content’s role in promoting student success. To support implementation of this vision, and build confidence in digital materials, states and districts must effectively communicate with the public and all stakeholders about their commitment to ensuring digital content quality, including being transparent about the strategies that will be used to ensure that only quality digital materials are used in the classroom.

¹⁰ Nomura Group, *Open Education Picking Up Speed* (March 14, 2014) (based on global markets research, recommending reduction in investment in legacy education content providers, finding “OER is on the edge of the tipping point into mainstream adoption and further ahead than we thought”).

- 2. Designate experienced state and district leaders to lead quality assurance policy development and oversight, and also empower practitioners, such as curriculum experts, professional learning specialists, content experts, technology leaders and other stakeholders with supporting implementation strategies for ensuring digital materials quality. This step must include investing in stakeholders' capacity—at all levels—to execute the state or district's digital content quality assurance strategy, including establishing classroom evaluation and performance templates/protocols, complemented by feedback loops designed to lead to timely content improvements and updates.**

Quality assessment of digital instructional materials, including OER, should be formalized at the state or district level and then be embedded in the education enterprise as a central exercise of educators and school leaders. This step includes establishing a robust process that enables the assessment of digital materials through different approaches and at various levels—with options for self-assessment, peer (and student) review, quality branding, and benchmarking or rating systems.

States and districts should invest in and support institutional mechanisms for the quality assessment of digital resources. A formal approach can serve as a template for local and individual efforts. For example, the process led by Washington's Office of the Superintendent of Public Instruction (OSPI), described below, includes a quality assurance template for school districts. States should formalize quality assurance efforts at the state and/or local level and then model the types of activities and considerations that educators, school leaders, and students can employ when analyzing the digital content's effectiveness.

A Case Study: Washington State

In April 2012, the Washington state legislature passed a bill that charged the state education agency, the Office of the Superintendent of Public Instruction (OSPI), with creating a library of OER aligned to the Common Core State Standards (CCSS). OSPI also was required to raise school district awareness of OER.

Pursuant to this directive, OSPI developed and implemented a review process to gauge the alignment of openly licensed courseware to the CCSS, focusing during two review cycles on Algebra, Integrated Math, Geometry, and grades 9 to 12 English Language Arts. Engaging educators and others via webinars and workshops, and selecting and training subject matter experts to assess OER, OSPI used three review instruments to assess the quality of the materials—with two instruments relevant for the quality review of all instructional materials, including traditional materials, and one focused specifically on the assessment of OER. Specifically, OSPI assessed materials using: 1) the Instructional Material Evaluation Tool (IMET) created by Student Achievement Partners and based on the publisher's criteria developed by the Council of Chief State School Officers, the National Governors Association, and the lead writers of the CCSS to assess alignment of OER with the CCSS, 2) the EQUiP rubric developed by Achieve to measure CCSS alignment, and 3) the Achieve rubrics for OER, discussed in this policy brief.

Following this quality assurance work, OSPI created an online library of OER reviews. For each resource included in the library, OSPI provides an overview of the review, ratings for each standard of the three assessment instruments used, and comments from each of the reviewers. Resources given low ratings are included in the library as well.

OSPI's process now serves as a model for Washington State school districts considering the adoption of full-course OER, and the results of its reviews are available to schools and districts in an online resource library.

For more information, see OSPI, Open Educational Resources, available at <http://digitalllearning.k12.wa.us/oer/>.

The knowledge level of individuals designated to support formal quality assurance efforts at the state or district level must also be a major consideration. States and districts should consider, for example, establishing specific mandatory digital content knowledge or experience, along with other prescribed expectations for the individuals selected. For example, Washington's OSPI selected and trained twenty reviewers per review cycle with subject matter expertise (10 in mathematics and 10 in English, language arts) and familiarity with the Common Core State Standards to lead the

examination of the alignment of available OER courseware to the Common Core State Standards. Other approaches may necessitate different participant types, such as content developers, purchasers, users, and researchers. Some states and districts include students on the teams conducting quality assessments of instructional materials, and the assessment of digital materials may require information technology specialists. States and districts should determine the goals and objectives of their digital quality assurance work at the outset (see recommendation 1) and then select relevant and representative stakeholders who can lead and execute the quality assurance process.

3. Provide rich guidance describing the characteristics of sound digital content quality assurance systems, such as developing and acknowledging tools and uniform state or local indicators and standards, and advancing an inclusive, not exclusive, approach to quality review.

States and districts should develop and provide educators with guidance about how to ensure the quality of digital instructional materials, including OER. As described above, many of the standards and indicators traditionally used by states and districts to assess instructional materials can and should be included in a quality assessment of digital resources. Additionally, states and districts can ensure that educators have access to quality assurance materials designed with OER in mind, which could involve newly developed resources or the identification of existing tools, like Achieve's OER rubrics. The interplay of sound traditional approaches and new quality review tools should be highlighted. The former are time-tested and broadly applicable and may be well known among educators, while newer digital content quality assurance strategies can be tailored to acknowledge the iterative nature of digital development and revision.

For example, broad standards and specific quality measures to consider include the following:

- **Content quality:** accuracy; alignment to standards; contemporary; comprehensiveness, organization, and pacing; and representation of diverse cultural, gender, and linguistic backgrounds
- **Pedagogical quality:** cognitive considerations—types of tasks, challenge, and learning outcomes; accessibility for varying student needs; and motivational strategies
- **Resources quality:** separate materials to support teacher planning and presenting subject matter, assessments, and technological interactivity
- **Technological quality:** accessibility, usability, interoperability across systems and platforms; and appropriate open licensing

When developing guidance for the field on how to assess digital quality, states and districts should avoid overly prohibitive approaches with respect to digital content, in which any content that does not meet a specific mark is barred from the classroom. Digital content can be updated and altered for different teaching styles and to reflect unique student needs and interests at any time. For example, a quality assurance review of OER might describe the material's intended purpose and identify its shortcomings in such a way that a teacher may recognize the tool as relevant, address its problems through necessary improvements, and then use the resource, tailored to student needs. Given this dynamic, state and district policymakers should avoid an exclusionary approach to digital content when possible.

4. Support educator preparation and professional learning opportunities focused on skills for the quality assessment of digital materials, including OER.

Teachers increasingly use technology and digital content in their classrooms but report challenges in identifying and vetting the materials that they discover.¹¹ States, districts, and educator preparation programs should provide educators with professional learning opportunities on how to select and use (and, in the case of OER, create and modify) digital instructional materials and integrate them into their classrooms.¹² A key focus of such courses and workshops should be on the skills and strategies needed to assess the quality of digital materials against state

¹¹ Parthenon Group, US Teacher Survey (n=2,076).

¹² See *The Accessibility of Learning Content for All Students, Including Students with Disabilities, Must Be Addressed in the Shift to Digital Instructional Materials* (SETDA, June 2014), available at http://setda.org/wp-content/uploads/2014/03/SETDA_PolicyBrief_Accessibility_FNL_5.29.pdf (last accessed, Aug. 24, 2014); *Clarifying Ownership of Teacher-Created Digital Content Empowers Educators to Personalize Education, Address Individual Student Needs* (SETDA, May 2014), available at (last accessed Aug. 24, 2014).

standards and local needs and expectations. Such approaches could entail use of the quality assessment instruments discussed above, with exercises that guide educators through the process of examining digital resources against the established quality standards.

These types of professional learning opportunities could be led and facilitated by highly experienced teachers and other educators who are skilled in the use of digital materials, particularly to the degree they are experienced at creating, using, and modifying OER. The Utah State Office of Education (USOE), for example, engaged teachers in the process of aggregating OER and aligning materials with state standards to produce completely open textbooks for Utah science courses.¹³ States and districts should build on these types of efforts as they create relevant seminars, workshops, and the like—and should look to master educators such as the ones engaged by the USOE to help develop the content of these professional learning opportunities.

Professional learning activities for (and by) educators not only are useful for formal quality reviews supported by the state or district in which materials are officially vetted. They also will empower teachers and other educators to vet available digital materials independently, as the need arises, in order to identify resources that are valuable for their particular students.

5. Ensure financial resources to establish and sustain an effective system of quality assessment of digital materials, including OER.

Finally, states and districts must support the use of high-quality digital learning materials, including OER, in classrooms with necessary investments of funding and other resources. This requires that states and districts address educator and student access to digital resources and invest in professional development to enhance educator acumen regarding the development, use, and assessment of digital materials. As part of this investment, policymakers might consider incentives that encourage OER development, use, and refinement—for example, publicly acknowledging exemplars for OER quality assessment, which should contribute to overall content quality.

States and districts also should ensure dedicated resources for evaluating the impact of digital learning materials on teacher practice and student learning over time. Technological advances, including digital data systems, enable states and districts to more easily collect information from the field and track student progress. For the quality assurance of digital materials, then, states and districts should consider how they cost-effectively obtain feedback from educators on the effectiveness of various digital resources, assess a resource's impact on students' academic progress, and implement timely content updates for redistribution to the field.

In light of these shifts, additional support for digital content specialists at the state and local educational agency level should be considered. States should also examine whether current policies regarding instructional materials, such as the statutes and regulations that govern purchasing, create financial or other barriers to the use of digital content.¹⁴

¹³ Utah Education Network, *Open Educational Resources*, available at <http://uen.org/oer/> (last accessed Aug. 25, 2014). The participation of teachers reflects Utah's historic confidence in educator participation in the review of instructional materials; the state's law establishing the State Instructional Materials Commission requires that the body include a secondary school principal, elementary school principal, secondary school teacher, and elementary school teacher. UTAH CODE ANN. § 53A-14-101.

¹⁴ See, e.g., *Clarifying Ownership of Teacher-Created Digital Content Empowers Educators to Personalize Education, Address Individual Student Needs* (SETDA, May 2014), *supra* note 14, which discusses importance of updating certain policies and addressing issue of ownership of OER.

Conclusion

Digital content, including open educational resources, holds tremendous promise for students and the schools that serve them. Digital tools and resources are increasingly available, and states and districts must think critically about how to instill in educators the confidence to use, evaluate, and propose updates to them. Building a strong, multi-level quality assurance system (recognizing digital content's unique attributes) is necessary to ensure digital content's greater incorporation into the classroom and use by teachers and students. Quality assurance may occur both formally, building on traditional state review processes that have served as templates for local reviews, and informally, with individual educators reviewing and selecting the instructional materials that best fit their needs.

States and districts can ensure that modern frameworks exist to vet and assess the materials that are used in classrooms by establishing and communicating a clear vision for digital materials, including OER; tasking relevant stakeholders and practitioners with modeling quality assessment work; providing guidance and resources on quality assessment; empowering educators to undertake quality assessment work by providing them with relevant professional learning opportunities; and supporting sustainable quality assessment with necessary investments. Every day, educators look critically at the resources they use to promote student success. With quality assessment part of the everyday fabric of school culture, the efforts described in this policy brief should not be perceived as an additional burden on the education enterprise. Rather, they can assist schools and educators with the process of identifying and creating high-quality digital learning materials that enrich the learning experience for students and improve student outcomes.



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(Footnotes)

1 Fla. Dep't of Educ., *Priorities for Evaluating Instructional Materials: Research Update* (Florida Dep't of Education, 2008), available at <http://www.cimes.fsu.edu/index.cfm?fuseaction=publications.view&publicationID=23&sortBy=3> (last accessed Aug. 18, 2014). Although the report is several years old, its publication represents a significant, multi-year investment by Florida to identify majority priorities for evaluation of instructional materials, based on nine years of research.