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The changing ecology of the curriculum marketplace in the era of the Common Core State Standards

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Abstract
This manuscript explores how the changing policy context of common standards may have influenced the provision of curriculum materials in the United States. Many educational reforms do little to change the nature of classroom instruction, and prior research has argued that this constancy is, at least in part, due to the common use of instructional materials from a small set of large publishing companies (Rowan in J Educ Change 3(3–4):283–314, 2002). However, common standards have been in place in many states since 2010, creating the potential for states to create and share curricular materials with each other, as well as for new organizations to enter the curriculum marketplace. Instructional materials provide a direct link to the instructional core, and recent research demonstrates that individual teachers, schools, and districts are increasingly selecting instructional materials from a variety of online sources, including databases of open educational resources and open-access, yearlong curricula. These materials are created, curated, and/or disseminated by state education agencies, nonprofit organizations, for-profit companies, and education employees. In this essay, we describe this new context and provide several cases of the shifting landscape of supply and demand related to curriculum materials. Various configurations of organizations are taking innovative approaches to providing curriculum materials in the context of the Common Core State Standards, as well as to influencing the materials school systems adopt. Finally, we discuss the implications of this backdrop for curriculum policy and practice.

Keywords Open educational resources · Curriculum · Nonsystem actors · Intermediary organizations · Standards · State education agencies · Educational policy · Common Core State Standards

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Introduction

Many educational researchers and historians have pointed out the stability of instructional approaches in K-12 schooling in the United States (U.S.), despite many efforts to change instruction in various content areas through systemic reform, comprehensive school reform, or other means (Cohen and Spillane 1992; Elmore 2004; Tyack and Cuban 1995). Some attribute the difficulty of instructional change to the decentralized and fragmented system of American education (e.g., Cohen and Moffitt 2009). However, in a seminal article in the Journal of Educational Change, “The Ecology of School Improvement: Notes on the School Improvement Industry in the United States”, Rowan (2002) claims that this stability is due, in part, to how school districts have traditionally purchased printed textbooks and other curricular materials from large publishing companies. Textbook publishers in the past were incentivized to pursue larger slices of national textbook revenue, leading them to gear their materials towards a generic, national scale rather than local needs (Rowan 2002).

However, we argue that recent developments in education policy have created what Rowan terms “disequilibrating shocks” (p. 307) in an organizational ecology framework, challenging the existing arrangement of organizations involved in school improvement. Here, we focus specifically on the ecology of curriculum material providers, arguing that the adoption of the Common Core State Standards (CCSS) across the majority of the U.S. in 2010 (LaVenia et al. 2015) has created conditions that challenge the traditional dominance of textbook publishing companies in the curriculum marketplace. Students and teachers can access online instructional materials from a broad set of organizations and from states themselves (Hodge et al. 2016; Opfer et al. 2016). Today, a variety of nonprofit organizations and for-profit corporations jostle for market share. In addition to traditional textbook publishers, new players in the curriculum marketplace include corporations like LearnZillion, nonprofits like Open Up Resources, states, and teacher resource-sharing sites like Teachers Pay Teachers.

These recent changes to the organizational ecology of curriculum materials are most visible in the new organizations and types of organizations supplying instructional materials. However, there is also a more complex set of actors demanding those materials, including districts; public, private, and charter schools; educational and charter management organizations; and individual teachers. In addition, there are new organizations exerting influence on those who demand instructional materials. We call this new group of actors situated between demand and supply “demand influencers”, as they have entered the marketplace to provide information and shape the choices that curriculum demanders make. These organizations may provide “disequilibrating shocks” (Rowan 2002, p. 307) to the marketplace that will allow new suppliers of curriculum materials to establish a niche and diminish the role of textbook publishers in providing curriculum materials. As we describe subsequently, the marketplace of instructional materials has shifted from a fairly stable set of organizational relationships to a complex and evolving set of transactions between a greater number of actors and types of actors, and the types of organizations that will emerge as dominant in this new organizational ecology are not yet clear.
As part of these shifting relationships, we also argue that common standards and technological advances have created the conditions for new forms of partnerships between the private and public sectors. Government-based actors like the federal government and state education agencies (SEAs) are increasingly involved in supplying curriculum materials, whether by funding the creation of curriculum materials via federal grants (e.g., Race to the Top) or by recruiting teachers within an SEA to create curriculum materials (Kornhaber et al. 2016). There are also cases, like Louisiana’s Guidebooks curriculum, of nonprofit organizations and for-profit companies collaborating with government-based actors to create and disseminate curriculum materials (Kaufman et al. 2016). Policy entrepreneurs for the CCSS suggested that common standards could create the potential for higher-quality curriculum materials because of these economies of scale and the potential for cross-state collaboration in curricular materials (Kornhaber et al. 2014). A broadened curricular marketplace, especially one that invites collaboration between actors across the public sector, nonprofits, and for-profits, could have important implications for the quality of curriculum materials, especially in the context of common standards. On the one hand, more providers could lead to a plethora of low-quality or unvetted curriculum materials. On the other hand, more providers could lead to more high-quality materials. For example, providers may align curriculum to common standards because these standards are the same across many states; this may lead to instructional change through greater consistency and coherence of materials. Another pathway for high-quality materials could be through local actors creating curriculum for a particular context (e.g., Louisiana’s Guidebooks) with the goal of creating standards-aligned curriculum that is more responsive to the needs of an individual state or district (Kaufman et al. 2016).

Sometimes these new approaches to providing curriculum involve materials known as “open educational resources” (OER). OER are generally defined as open-access curriculum materials intended for classroom use in both K-12 and higher education, with licensing that permits anyone to use, revise, and/or share them (Atkins et al. 2007; Sparks 2017). Much of the existing research on OER tends to focus on their potential for expanding access to education across the globe (Geith and Vignare 2008; Kanwar and Uvalić-Trumbić 2011) or their use in higher education (e.g., Wiley et al. 2012). Many sources of OER are nonprofits: the Institute for the Study of Knowledge Management in Education sponsors OER Commons, which targets both a U.S. and global audience. Rice University hosts OpenStax, which provides mostly STEM-focused curriculum for Advanced Placement and college courses. CK-12 is known for its use of “FlexBooks”, or digital textbooks consisting of OER that teachers can easily adapt and customize. A recent report on states’ use of OER found that 31 states are sharing OER materials, either through creating their own repositories or using a third-party platform, and 12 states have sponsored the development of at least some OER resources (Tepe and Mooney 2018). There is some evidence of teachers seeking piecemeal OER for classroom use (Kaufman et al. 2017; Opfer et al. 2016), as well as districts seeking coherent OER curricula (Jacobson 2017; U.S. Department of Education Office of Educational Technology 2018).
We argue that these new conditions—common standards and new providers, including those focused on OER—have enabled novel partnerships between supply- and demand-side actors around the provision of instructional materials. These new partnerships are important because they may serve to create higher-quality materials that are also more responsive to state and local contexts. In the following sections, we provide background information on the CCSS in the U.S., with attention to the relationship between common standards and resource-sharing, and analyze the role of organizations in educational reform. Then, we describe several cases of the shifting landscape of supply and demand related to curriculum materials, in which various configurations of states, nonprofits, and for-profits are taking innovative approaches to providing curriculum materials in the context of the CCSS. Finally, we profile a new set of actors—demand influencers—and discuss the implications of this backdrop for curriculum policy and practice.

**The Common Core State Standards and the potential for shared resources across states**

The CCSS are a set of shared standards adopted by the majority of states in 2010. As of 2017, *Education Week* reports that 34 states and the District of Columbia have kept the standards; 11 have (or soon will) rewrite/replace the standards, one adopted in English language arts only, and four never adopted (Ujifusa 2017). Central to CCSS policy entrepreneurs’ theory of action was that common standards would create greater economies of scale in virtually every part of standards-based reform—curriculum, assessment, and professional development (PD) (Kornhaber et al. 2014). Policy entrepreneurs viewed technology as a key driver of these economies of scale, especially around the sharing of curriculum materials through online databases, as well as the ability to provide assessments online (Kornhaber et al. 2014).

When Kornhaber et al. (2017) used local newspaper articles to examine CCSS implementation in 10 states, they found a mismatch between policy entrepreneurs’ ideas about economies of scale in curricular resources and practitioners’ perspectives that curriculum was not easily available or was used in problematic ways. For example, though New York state’s EngageNY modules are widely downloaded (Kaufman et al. 2017), they were criticized in New York public hearings for being too prescriptive (Kornhaber et al. 2017). Kornhaber et al. (2017) found that economies of scale were an unrealized outcome due to low availability of high-quality instructional resources. However, databases of OER, as well as nonprofits devoted to providing free curricular and professional resources, have proliferated in the last several years, and SEA websites often direct teachers towards online databases like OER Commons or other state-sponsored databases of curricular materials (Authors 2016; Tepe and Mooney 2018). SEAs’ rationales for creating or linking to databases

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1 According to Ujifusa’s (2017) map, the states of Arizona, Arkansas, Indiana, Louisiana, Missouri, New Jersey, New York, Oklahoma, South Carolina, Tennessee, West Virginia will rewrite or have rewritten their standards. Alaska, Nebraska, Texas, and Virginia never adopted the standards.
of materials may have more to do with cost-savings than the CCSS. However, the frequency with which SEAs are creating state-sponsored databases suggests that the degree to which the CCSS enables curricular economies of scale remains an open question, with potential for greater economies of scale than in early CCSS implementation almost a decade ago.

**Organizations involved in the Common Core and curriculum materials**

Both for-profit and nonprofit groups have served a variety of roles related to school improvement for decades (Rowan 2002). Previous research has illuminated the role of private companies in market-based reforms under No Child Left Behind (Burch 2009). However, little is known about the organizations involved in CCSS implementation. At the national level, there is some evidence about how organizations involved in CCSS adoption marshaled research evidence to create a compelling rationale for common standards and how various organizations continued to support or resist the CCSS during its enactment and implementation (McDonnell and Weatherford 2013a, b, 2016). Other researchers have traced how foundation and federal funding supported various organizations involved in CCSS implementation (Kornhaber et al. 2016), but the different kinds of organizations providing CCSS curriculum materials are not well understood.

A useful framework for classifying organizations involved in school improvement comes from Rowan (2002), who uses an organizational ecology perspective. Organizations can be considered part of the same population when they have similar structures, operate in a similar environment, and draw on the same resources (Honig 2004)—here, the population is the many organizations involved in the curriculum marketplace. Similar to how different species of plants and animals have niches within an ecology in the natural environment, organizational ecologists classify organizations within a population according to whether the organizations are part of the same “niche”—or a “multidimensional resource space...a set of resources upon which the organizations in a given population depend for survival” (Rowan 2002, p. 290). Organizations within the same niche may start out with different structures, but over time will come to resemble each other, as certain forms are more successful than others. Further, organizations will either change to resemble the successful structure or become extinct (Freeman and Hannan 1989; Rowan 2002). Organizations that are more nimble and flexible are more likely to withstand a changing policy environment.

Rowan describes niches within the school improvement industry according to the source of their initial and ongoing resources (see Table 1). Rowan terms an organization’s initial resources as their “primary resources”, or the source of the funds used to found the organization. Rowan describes three categories of primary resources: capital-based, membership-based, and endowment-based. He also identifies a secondary set of resources called transactional resources, which are ongoing resources that maintain the organization. Transactional resources come from a particular group exchanging funds with the organization in exchange for a desired good.
or service. The three groups involved in transactions for school improvement in this framework are school systems, education employees, and granting agencies.

In terms of organizations’ primary resources, capital-based organizations are generally for-profit companies. The relatively small number of textbook publishers providing curriculum at the time of Rowan’s article are the primary example of capital-based organizations involved in school improvement. Their ongoing financial resources generally come through transactions with school systems purchasing their materials. Organizations whose primary and transactional resources are

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**Table 1** Common types of organizations involved in school improvement

<table>
<thead>
<tr>
<th>Capital-based</th>
<th>Ex. textbook publishers</th>
<th>Membership-based</th>
<th>Ex. professional associations</th>
<th>Endowment-based</th>
<th>Ex. nonprofits funded by foundations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transactions with school systems</td>
<td>Transactions with education employees</td>
<td>Transactions with granting agencies</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note*: Table 1 adapted from Rowan (2002), p. 293, “Fundamental niches in the school improvement industry”. Types of primary resources are described in the row titles; types of transactional resources are described in the column titles.
membership-based are often professional associations or unions, where dues serve as revenue, and the organizations provide information or training to individual education employees, rather than to districts. Finally, some organizations are founded with endowment support, and remain in transaction with granting agencies to stay in existence. Rowan (2002) acknowledges that these categories are constantly shifting and that new contexts and technological developments, particularly the internet, may create disequilibrium within this ecology and challenge the existing classifications (p. 292).

Central to Rowan’s framework, but perhaps less explicitly stated, is the idea that the transactions between these two types of organizations have a clear supply and demand element. In his table, the types of organizations in the row titles are those that can provide a service—a textbook, professional support via membership organizations—to one of the groups across the top row. Thinking specifically about how Rowan’s initial groups may be involved in the curriculum marketplace in the context of shared standards, we have slightly reformatted Rowan’s table into a figure that illustrates this supply–demand relationship, indicating that we see capital-based and membership-based organizations as curriculum suppliers, or those who create and/or provide curricular materials, and school systems and education employees as curriculum demanders, groups who are seeking or purchasing materials. We have used a dashed line and circles to indicate that there is not a direct relationship between granting agencies as seekers of curriculum materials from endowment-based organizations (Fig. 1).

Importantly, Rowan’s initial diagram of the organizations involved in school improvement at that time represents these transactions at a one-to-one level to illustrate each group’s niche within the organizational ecology: typically, there is one group on either side of supply and demand (i.e., a membership-based organization transacts with education employees rather than school systems or granting agencies). Thinking in terms of all curriculum suppliers and demanders as a single set, that relationship might be visually represented as the direct connection between curriculum suppliers and demanders in the bottom of Fig. 2.
Rowan acknowledges that organizations outside of the diagonal in Table 1 exist, but that the survival of organizations operating outside of the boundaries of an established niche is riskier. Given that the educational landscape of curriculum supply and demand has shifted in the years since the passage of No Child Left Behind, examples now exist not only of organizations operating outside the diagonal, but also of organizations that are influencing the types of transactions and, perhaps, the groups between which transactions occur. We term these new players demand influencers, or those who guide and/or incentivize the decisions that curriculum suppliers and demanders make as they create and seek curriculum, respectively. These organizations are represented in the top of Fig. 2. 

In the sections that follow, we provide illustrative cases of organizations that are operating outside of Rowan’s diagonal, either because of the new types of organizational actors supplying curriculum or because of the organizations’ evolving configurations of transactional resources. We also give attention to the ways in which many of these transactional relationships involve partnerships between government-based organizations and those in the private and public sectors. These relationships are visualized in Fig. 3, which uses different colors to illustrate each profile.

![Fig. 3 Illustration of current complexity in the curriculum marketplace. Note: Dotted lines indicate past transactional relationships; solid lines indicate current relationships. Types of organizations that are not prominent in the curriculum marketplace are denoted in gray (membership-based organizations and granting agencies). Types of curriculum suppliers that are new to the curriculum marketplace are encircled with the dotted/dashed lines (government-based and education employees). Each color denotes a particular organization: Green = LearnZillion; Brown = National Council of Teachers of English; Blue = Open Up Resources; Purple = EngageNY/UnboundEd; Red = Teachers Pay Teachers. (Color figure online)
Dotted lines indicate past transactional relationships, and solid lines indicate categories of transactions as of this publication. Types of organizations that are not prominent in the curriculum marketplace are denoted in gray (membership-based organizations and granting agencies). Types of curriculum suppliers that are new to the curriculum marketplace are encircled with the dotted/dashed lines (government-based and education employees). After profiling several cases of curriculum suppliers and demanders, we describe organizations that we view as demand influencers, explaining how these organizations work to incentivize the decisions that curricular suppliers and demanders make. While not a comprehensive review of all new organizations in the curriculum marketplace, these cases represent new actors in new transactional configurations—shifts that may alter the ecology of the existing curriculum materials marketplace.

Profiles of curriculum suppliers and demanders

EngageNY and UnboundEd Learning, Inc.: A government-based organization becomes endowment-based and transacts with school systems and education employees

EngageNY (engageny.org) is a website sponsored by the New York State Education Department (NYSED) with PD videos and presentations, as well as curriculum materials (represented in purple on Fig. 3). While some of the site’s information on policy initiatives is specific to New York state, a substantial section remains devoted to the CCSS, even though NY state adopted the Next Generation Learning Standards in September 2017, nominally moving away from the CCSS. In our earlier work identifying the sponsors of state-provided standards resources for ELA, we found that nine states linked to materials created by and/or hosted at the EngageNY.org website (Authors 2016). A national survey conducted by RAND also found that teachers across the country rely on EngageNY materials—at least 30% of elementary and secondary mathematics and ELA teachers in standards-adopting states (Opfer et al. 2016). To understand more about why EngageNY resources gained traction, Kaufman and colleagues (2017) conducted an evaluation of EngageNY material use, combining information from Google Analytics with a subset of data from a national survey, as well as interviews with teachers in California and New York (Kaufman et al. 2017). Surprisingly, the fact that EngageNY modules are freely available to download was not a factor highly influencing teachers’ use of EngageNY; instead, teachers reported that they downloaded the modules because they were aligned with their state standards (Kaufman et al. 2017). Though NYSED continues to maintain and improve the functionality of the EngageNY site, now that Race to the Top funds have run out, the SEA has fewer resources with which to update materials on the site. A new organization, UnboundEd Learning, Inc. (unbounded.org), was founded in 2016 to digitally house and expand on EngageNY resources (Heitin 2016a). Kate Gerson, “former lead architect of EngageNY” (Heitin 2016b), is the Managing Partner of Programs at UnboundEd and describes their mission as helping teachers adapt
open educational resources such as the EngageNY materials to meet the needs of their students:

What we see as the biggest challenge in schools is managing a divide between rigorous high standards for all students and the real developmental consequences of poverty. We’re trying to give [teachers] the support to work through that divide—very concrete examples and advice for what you do if you have a kid coming to you two or three years below grade level—what lessons you insert, how you adapt the good, free curriculum to meet the needs of your kids (Heitin 2016a).

In addition to providing expanded EngageNY curriculum materials, UnboundEd offers PD to educators—not through district-sponsored PD, but through institutes for individual teachers and administrators.

The metamorphosis of EngageNY to UnboundEd, highlighted in purple on Fig. 3, highlights the evolving nature of curriculum organizations’ relationships with demand-side actors. Recall that dotted lines indicate past transactional relationships; because EngageNY modules were used extensively by school systems in New York and individual education employees in many states, there is a dotted purple line in Fig. 3 between government-based organizations and both school systems and education employees. The circle representing government-based organizations is circumscribed with a dotted/dashed line to indicate that it is a new category of organization involved in creating curriculum materials. The solid line between endowment-based organizations and granting agencies represents UnboundEd as the current incarnation of EngageNY. Primarily an endowment-based organization, UnboundEd has received over five million dollars from organizations such as the Gates and Hewlett Foundations (Heitin 2016a), but resources also come from transactions with education employees who pay to participate in learning conferences (thus there is also a solid purple line between endowment-based organizations and education employees). For example, UnboundEd hosts PD conferences called Standards Institutes, with separate learning pathways for ELA teachers, mathematics teachers, and educational leaders. At the Standards Institutes, “...participants do not just study the standards, they dissect them. Experienced facilitators guide educators as they explore how best to teach to higher standards and support a culture of outstanding teaching in their schools” (UnboundEd 2017). Thus, UnboundEd’s funding stream consists of transactions with granting agencies and with individual education employees (in Rowan’s framework, typically the province of membership organizations).

EngageNY also illustrates how many transactional relationships in this curriculum marketplace are between government-based organizations and those in the private and nonprofit sectors. After receiving federal Race to the Top funds, the government-based NYSED subsequently commissioned curriculum materials for EngageNY from nonprofit organizations (Kornhaber et al. 2016). Curriculum modules for mathematics were made by the nonprofit organization Great Minds, and by a variety of nonprofits in ELA, including Expeditionary Learning, Odell Education, and the Public Consulting Group (Haydel and Carmichael 2015; Kaufman et al. 2017). These materials are currently hosted on both the government-based
EngageNY and endowment-based UnboundEd, with additional resources posted on UnboundEd that do not exist on the state-sponsored site.

**Open Up Resources: An endowment-based organization moves from transactions with granting agencies to school systems**

The case of Open Up Resources (openupresources.org) also illustrates shifting funding streams outside the norm of how organizations have typically been involved in school improvement (blue lines on Fig. 3). Similar to how UnboundEd (an organization) evolved out of EngageNY (an SEA effort), the Open Up Resources organization evolved out of the K-12 OER Collaborative, which was a group of thirteen states and several supporting organizations. The collaborative was brought together by the Cupertino, CA-based nonprofit The Learning Accelerator, a Silicon Valley incubator for blended learning initiatives (Open Up Resources 2017b). Open Up Resources provides coherent, open access curriculum to districts. CEO Larry Singer, who previously worked for Pearson, contrasts Open Up Resources with EngageNY, in that he views EngageNY materials as directed towards individual teachers rather than districts: “‘EngageNY targeted teachers and not school districts,’ says Singer. ‘Our target focuses on school districts and supported teacher adoptions, not teachers as consumers’” (Johnson 2017).

Open Up Resources’s initial funds (primary resources) were endowment-based, including funds and support services from The Learning Accelerator as well as significant investment from the Hewlett Foundation, a large supporter of OER (signaled by the dotted blue line between endowment-based organizations and granting agencies). As of 2017, Open Up Resources seemed to be shifting the source of its ongoing funding from endowment to transactions with school systems (the solid blue line). A recent article in the online publication *Ed Surge* described,

> In the last two years Open Up Resources has raised $16 million from philanthropies, but hopes to soon wean itself off outside funding. Singer projects it will reach $40 million in revenue in 2018 from print sales (which cover basic bulk printing costs of the OER materials) and ‘implementation services’ such as the professional development sessions… (Johnson 2017).

Even by the end of 2017, Singer projected about $4 million in revenue from transactions with school systems (Sawchuk 2017a).

Open Up Resources is attempting to make school districts its primary market, signaling that the organization falls outside the diagonal in Rowan’s typology. In other words, the organization is pivoting to transactions with school systems as its primary source of revenue. While districts might pay printing fees to Open Up resources, Open Up Resources is banking—literally—on the idea that districts are willing to pay the nonprofit for PD since they have not paid for the curriculum itself.

Similar to the EngageNY/UnboundEd example above, Open Up Resources also illustrates complex configurations of public and private actors in the curriculum marketplace. The curriculum materials Open Up Resources provides were initially developed by organizations after a request for proposals (RFP) process. The
Illustrative Mathematics organization developed the middle school mathematics curriculum, and EL Education (formerly Expeditionary Learning) developed the K-5 ELA materials. A subsequent RFP was put out for secondary mathematics and ELA. While Illustrative Mathematics was chosen for secondary mathematics, it was a state—the Louisiana Department of Education—who won the commission for curricular work in middle school ELA, proposing to expand on their “Guidebooks”, or units created by Louisiana teachers currently hosted on the for-profit site LearnZillion (profiled below) (Open Up Resources 2017a).

LearnZillion: A capital-based organization transacts with school systems and education employees

LearnZillion (learnzillion.com) is a for-profit organization established in 2011 that provides both free educational resources for individual teachers and services to school systems (denoted in Fig. 3 by green lines). The company received $22.4 million dollars over several rounds of venture capital funding (Crunchbase Inc. 2017). LearnZillion describes itself as “the first K-12 Curriculum-as-a-Service company. We’re changing the paradigm of curriculum from a static product to an adaptable, cloud-based service” (LearnZillion 2017). LearnZillion provides three strands of services. The first strand is composed of digital curricular materials, including unit and lesson plans and videos for classroom instruction. In addition to curriculum, LearnZillion offers “professional services”, including creation of additional curricular materials, PD, and adaptation of other OER. Finally, LearnZillion offers its own “enterprise platform”, cloud-based software through which districts and teachers can curate, edit, and write curriculum and assessments, sync LearnZillion with both student information systems and learning management systems, and run a variety of reports on the use of materials and assessment data.

As a for-profit company providing curriculum, Rowan’s typology would predict LearnZillion transacting primarily with school systems. LearnZillion does transact with districts, indicated by the green line between capital-based organizations and school systems, but they do not only provide curriculum, but also a full software platform and PD, as described above. LearnZillion also transacts with individual teachers in how it offers free, downloadable curricular resources for teachers (indicated by the green line between capital-based organizations and education employees). While LearnZillion does not make money directly from the resources individual teachers download, teachers’ use of LearnZillion resources may indirectly lead to more business with school systems.

Similar to other supply–demand relationships described in this section, LearnZillion exemplifies complex relationships between public and private actors. Many curricular resources are made by LearnZillion’s staff, but the ELA Guidebooks for grades 3–12 were made by Louisiana teachers, illustrating a unique partnership between a state department of education and a for-profit organization. The guidebooks are hosted on LearnZillion, and the Louisiana Department of Education website directs teachers to LearnZillion to download them. Similar to the modules on
EngageNY, the guidebooks are freely available to download, but only after registering for a LearnZillion account.

**Teachers Pay Teachers: A capital-based organization facilitates education employees transacting with other education employees and school systems**

In Fig. 3, education employees are also represented as suppliers of curriculum materials (by the dotted/dashed circle on the bottom left-hand side). This approach is exemplified by the for-profit organization Teachers Pay Teachers (TpT; teacherspayteachers.com), the first and largest online marketplace for teachers to sell original curriculum materials. TpT was founded in April 2006 by Paul Edelman, a former NYC public school teacher, and in 2019, its website claimed that over than 5 million teachers (2 out of every 3 U.S. teachers) have used one of the 3 million resources housed on the site (Teachers Pay Teachers n.d.-a). Teachers Pay Teachers has been a capital-based organization since its inception. They received one round of venture capital funding in 2014 (Crunchbase 2019), but their transactional resources generally come from taking a sales commission (for a “basic seller”, TpT takes 45%) (Teachers Pay Teachers n.d.-b). The metrics used to determine quality on TpT are the reviews and number of stars TpT users give to different resources, as well as number of purchases.

TpT is an example of a company that does not fit neatly into Rowan’s (2002) ecology of school improvement organizations. In Rowan’s framework, education employees were named as consumers of educational materials, but not producers. TpT changes the paradigm of how resources are created and purchased, as individual teachers are both the producers and consumers of educational resources. This relationship is signaled on Fig. 3 by the solid red line connecting education employees on the supply-side to those on the demand-side. For simplicity, we have not represented how those connections are filtered through the capital-based organization of TpT, but it is important to note that the connections between education employees are mediated by a company who provides a service, but also benefits from those connections. In addition, TpT enables teachers to transact with school systems, as schools and districts can purchase TpT memberships that allow education employees to select curricular materials and have the cost charged to the school system (this is indicated by the solid red line between education employees and school systems).

**Demand influencers**

The group of organizations we call *demand influencers* is a set of organizations who do not supply or demand curriculum, but provide information about curriculum as a way of influencing purchasing behavior, and, indirectly, influencing curriculum materials. In Fig. 3, the role of these organizations in indicated in the gray triangle between curriculum suppliers and demanders. These organizations are
endowment-based, government-based, and capital-based, and we discuss an example of each below.

**EdReports: An endowment-based demand influencer**

EdReports ([EdReports.org](http://EdReports.org)) is a nonprofit (endowment-based) organization that “increases the capacity of teachers, administrators, and leaders to seek, identify, and demand the highest quality instructional materials” (EdReports 2018). EdReports sees itself as an impartial, third-party rater of curriculum materials’ alignment to standards, writing about its mission: “Instructional materials that claim to be standards-aligned have saturated the market. Yet we know many of those claims have not been verified by a reliable source” (EdReports 2018). EdReports initially rated mathematics and ELA curriculum, and recently added ratings for middle school science materials (Sawchuk 2018).

EdReports has been a tax-exempt organization since 2014 ([ProPublica](https://www.propublica.org)), endowment-based in both primary and transactional resources. EdReports lists funding from a variety of foundations, including the Gates, Schusterman, Schwab, and Hewlett Foundations (EdReports 2018) and does not appear to be shifting this funding stream, instead remaining dependent primarily on transactions with granting agencies.

In the traditional sense of transactions, then, EdReports transacts with granting agencies. However, the organization views school districts as its main audience and argues that districts need access to knowledge about high-quality curriculum as an equity strategy to describe the need for its existence, saying “Our independent reviews empower school districts with comprehensive information and help to identify quality materials so that all students have access to the resources to ensure they thrive” (EdReports 2018). EdReports hopes that districts and district representatives will interact with their online ratings, leading to a more traditional financial transaction between a school system and a curriculum supplier (whether a traditional capital-based supplier or a nonprofit or OER-provider).

There is some evidence that district purchasing behavior is influenced by EdReports ratings. The city of Detroit used EdReports to choose new math and ELA curriculum after an audit found that the city’s materials predated the CCSS (Iasevoli 2018). A recent report from the Center for American Progress found that one-third of the 30 largest school districts were using materials that EdReports rated as aligned (Partelow and Shapiro 2018). When large districts send out RFPs for curriculum, they are increasingly requesting curriculum that is highly rated by EdReports (Johns Hopkins School of Education Institute for Education Policy 2018). EdReports has also influenced some SEAs. California partnered with EdReports to launch a California-specific curriculum review website called the California Curriculum Collaborative. Similarly, Nebraska (a non-CCSS state) has created its own site to link to EdReports curriculum ratings ([nematerialsmatter.org](http://nematerialsmatter.org)).

However, EdReports’s goal is not only to explicitly influence demand via district purchasing behavior, but also to influence curriculum supply through the behavior of publishing companies/organizations. EdReports ratings have been the subject of
many stories in *Education Week*, with general findings that few curricula are highly rated and many popular curricula do not score highly on their criteria (Loewus 2016a, b, 2017; Sawchuk 2017b). Because only a few curricula are highly rated, EdReports reviews could potentially be very influential to district purchasing. However, EdReports would also like to influence publishers to change their materials. A recent *Education Week* article reports, “When asked whether EdReports.org plans to re-review other programs, [Executive Director] Hirsch said his teams will gladly re-analyze materials if the publisher makes substantive changes to them. ‘Our goal is to help ensure that curricular products really help teachers help students reach the depth of college- and career-ready standards,’ he said. ‘Nothing would excite us more than for publishers to want us to re-review because they’ve made changes they think would impact their score in a positive way’” (Loewus 2017). Similarly, the EdReports ELA rating tool for grades three through eight says that their ratings “will improve the supply of quality materials over time, leading to better student achievement outcomes” (*Edreports.org* n.d., p. 2).

While it is still unclear how and to what extent publishers’ behavior may be changed by EdReports reviews, there is some suggestive evidence that publishers are not only attentive to their products’ EdReports ratings, but prefer having one clear set of criteria to meet. Interviews with a sample of curriculum providers who were asked about districts’ RFPs indicated that they prefer that districts ask for curriculum highly rated by EdReports rather than a general third party to prevent other companies from conducting a superficial review processes (Johns Hopkins School of Education Institute for Education Policy 2018). In other words, publishers view having one-third-party reviewer as providing quality control and a consistent set of standards to meet.

**Louisiana Department of Education: A government-based demand influencer**

The Louisiana Department of Education (LADOE), a SEA, is a government-based actor involved in the curriculum marketplace as both a demand influencer and a curriculum supplier (as described earlier in the context of LearnZillion). As a supplier (similar to the New York’s EngageNY curriculum), Louisiana created its own “ELA Guidebooks”, a series of units created with the needs of Louisiana students and alignment to the CCSS in mind (Kaufman et al. 2016). Here, we focus on LADOE’s role as a demand influencer. LADOE provides reviews of yearlong ELA and mathematics curriculum, with the highest rated materials marked as “Tier 1.” Ratings are determined according to criteria similar to those disseminated by the Common Core lead authors, and LADOE works with publishers of materials rated as Tier 1 to secure favorable pricing for districts through state contracts (Kaufman et al. 2016).

In ELA, highly rated curricula come from more traditional for-profit publishing companies like Pearson and Houghton Mifflin Harcourt, newer for-profits like Amplify, and nonprofits like Core Knowledge and Great Minds. The LADOE ELA Guidebooks are also rated as Tier 1. To purchase the texts used in the ELA units, LADOE has arranged contracts with the for-profits American Reading Company and XanEdu (Louisiana Department of Education 2017). However, while the
instructional materials can be downloaded from the for-profit LearnZillion’s website, there is not currently an arrangement for print services of the instructional materials unless districts contract with LearnZillion.

In this case, districts are incentivized by the state to transact with particular organizations providing curriculum materials, and the state seems agnostic about the type of organization providing these materials as long as they are rated in line with the standards. Interestingly, LADOE does not take the approach of California and Nebraska of creating sites linked to EdReports reviews, but instead uses a Teacher Leader cadre of Louisiana teachers to rate materials. Although this could be seen as an unnecessary duplication of work, it may also serve as a strategy for greater buy-in within the state, thus circumventing perceptions of dissolution of local control. The curriculum demanders are traditional schools and districts, though the proliferation of charter schools in Louisiana after Hurricane Katrina also indicates that demanders are likely to be charter management and education management organizations as well. The curriculum suppliers rated highly by the state, including the state itself, represent the new and more complex landscape of curriculum material providers. LADOE seems to be seeking to influence the behavior of demanders in particular, by providing favorable pricing for particular materials. To some extent, they may seek to influence curriculum material suppliers. Similar to EdReports, a LADOE official quoted in a recent RAND report remarked, “‘It’s not pleasant when you give big publishers Tier 3 ratings and they have big lobbies and bring in millions of dollars…It would have been easy to let it go’” (Kaufman et al. 2016, p. 12), indicating that publishers have taken note of the LADOE reviews.

**Learning List: A capital-based demand influencer**

Learning List ([learninglist.com](http://learninglist.com)) is a for-profit organization describing itself as “a resource review service by and for educators” ([Learning List 2015a](http://learninglist.com)). Founded in Texas by Jackie Lain in 2013, Learning List began offering national services in 2014 ([Halpern 2014](http://halpern.com)). One service Learning List offers is aligning instructional materials to the CCSS as well as to individual state standards ([Heitin 2014](http://heitin.com)). As a subscription service, Learning List provides third-party reviews of published educational materials ([Turner 2014](http://turner.com)). A subscription allows schools and districts to: (1) see the vertical alignment of materials that span grade levels; (2) compare curricular materials; (3) identify holes/gaps in current materials; (4) find materials that fill gaps; and (5) complete cost analysis of curriculum adoption ([Learning List 2015b](http://learninglist.com)). Subscribers can access verification of standards-alignment, editorial reviews, and subscriber ratings ([Halpern 2014](http://halpern.com)). Subscribers also have the option to request reviews of particular materials. In addition, Learning List provides a publisher subscription said to “access reviews providing unparalleled market intelligence” ([Learning List 2015b](http://learninglist.com)).

As a capital-based organization, Learning List primarily transacts with districts, providing reviews of educational materials; however, individual schools may also transact with Learning List. Like other demand influencers, Learning List provides independent reviews to inform curriculum decisions or to suggest supplemental materials. Thus, district adoption and implementation decisions could be influenced.
by the knowledge gleaned from such independent reviews. In addition, teachers’ instructional decisions could be altered by Learning List reviews, in that they are able to understand how materials align (or not) to standards. This knowledge could shape the selection or adaptation of materials for lessons. Beyond providing reviews of curricular materials, Learning List also transacts with publishers, offering feedback about curricular materials for publishers who are willing to subscribe. Transactions themselves are traditional in that they are an exchange of services for pay.

Conclusion

The organizations profiled above each illustrate partnerships between a diverse set of groups—including school systems, educational employees, and a variety of organizations—that are often operating outside their traditional funding streams. It is important to note that the types of organizations involved in school reform—especially curricular reform—have changed. Rowan’s initial framework included three primary organizational types involved in school improvement: capital-based, endowment-based, and membership-based. In the current curriculum marketplace, there is little involvement of membership-based organizations (in Fig. 3, membership-based organizations appear in gray to indicate this). For example, the National Council of Teachers of English partners with the International Literacy Association to sponsor a curricular resource website (readwritethink.org), but the organization has remained in transaction with education employees rather than seeking funds from school systems or granting agencies. Now, new types of organizational actors not in Rowan’s initial framework have emerged. In addition to capital-based and endowment-based organizations, government-based organizations (e.g., the Louisiana Department of Education) and education employees (e.g., teachers who put resources on TeachersPayTeachers.com) are groups who have the potential to disrupt the existing ecology of curriculum material provision. It seems that access to common standards has created not only greater economies of scale for curricular reform (Kornhaber et al. 2014), but perhaps also increased the types of curriculum providers who can fit into the ecology of curriculum materials.

If these organizations can survive in their new niches, it could indicate a disruption to the existing ecology of textbook companies as the main supplier of curriculum, as other types of organizations increasingly creep into transactions with school systems as a major source of revenue. Traditionally, transactions between those involved in school improvement in general and curriculum specifically have been financial (e.g., school systems, education employees, or granting agencies provide money to an organization in return for some desired good related to school improvement such as textbooks or other curriculum, PD, data storage or analysis, membership benefits, etc.). However, most OER are, by their nature, free, and whatever transactional resources may accrue to an organization will not come from individual employees or school systems paying for curriculum on its own. Some organizations operate on the model of providing curriculum for free but transacting (in the traditional sense) with school systems for other services: PD (Open Up Resources) or a software suite for curriculum, assessment, and data (LearnZillion). Other
organizations that provide curriculum and/or curricular resources have decided to remain funded primarily by granting agencies rather than shift revenue streams wholesale, so they will continue to transact with foundations (UnboundEd).

However, a direct economic exchange relationship of transactions and trans- actional resources may no longer exist in a digital world in which “clicks” and “pageviews” are the substance of revenue-generating advertisements, and curriculum is increasingly available in an open format. OER are generally downloaded; thus, page views, clicks, or downloads might serve as an indicator of an exchange relationship in which an individual, perhaps operating on behalf of a school system, interacts with those materials. Kaufman et al. (2017) measured the influence of EngageNY by the number of downloads, using Google Analytics to understand the states most frequently downloading the materials. Transactions between school systems or individuals and organizations could also be in-person exchanges of knowledge, in which the organization provides conferences, PD, or some other in-person or online interactions.

Transactions may also be thought of as having the goal of influence over curriculum; providing information about materials may make some materials more widely used than others. Demand influencers are a group of organizations seeking interactions with curriculum consumers and demanders to influence their financial transactions. Rowan’s original framework accounted those who supply and demand curricular materials, but did not account for organizations outside of this paradigm trying to influence supply and demand. EdReports and Learning List are not vendors of curricular materials, but instead provide curricular reviews to facilitate decision-making about curricular materials use and adoption. These organizations have the potential to shift not only school system purchasing, but also curriculum supply if suppliers are unhappy with their ratings and change their materials to achieve higher reviews.

In this altered curriculum marketplace, the growing availability of open and proprietary materials from new types of organizations have implications for research, policy, and practice. District leaders making decisions about curriculum face a broad array of print and digital curriculum from which they can choose a la carte or in a complete package sometimes including grading and data reporting software. The variety of choices suggests that one fruitful line of research would be to understand state and district leaders’ decision-making around when, and under what conditions, they select and disseminate OER, and from which combination of nonprofit and for-profit providers. Open Up Resources is banking on districts choosing to pay for PD—will they? Finally, state curriculum adoption policies are also changing to become more receptive to digital materials (Bliss and Patrick 2012; Tepe and Mooney 2018). Therefore, building state capacity to support districts’ curricular choices is a key area of policy.

In this new policy landscape of common standards and the increasing accessibility of online resources, traditional textbook publishers may be hard pressed to maintain their own niche in the curriculum economy, as states, nonprofits, and new for-profits enter into the marketplace of curriculum and instructional materials. If organizations are able successfully shift their funding streams to operate outside of these boundaries over the long term, this may signal that the organizational ecology
of school improvement related to curriculum materials has substantially shifted, potentially disrupting the dominance of the textbook publishing industry. However, the questions remain: When the curriculum marketplace settles as organizations find their new niches, what types of organizations will be most prominent in providing curriculum and instructional materials for K-12 students, and to what end? Further, regardless of their source, content, or form, will any of these materials make their way into the instructional core? Will they make a difference in improving teaching and learning for students?

References


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