Online Resources and Professional Development for Teachers of English Learners: A US State-by-State Analysis

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Abstract

The United States has a growing population of English learners (ELs) and a shortage of trained English as Second Language (ESL) teachers, leaving many teachers unprepared to work with ELs. As teachers turn frequently to online resources for guidance, we reviewed the available resources and professional development on departments of education websites from all 50 US states and District of Columbia related to ELs. Our research question was: What type of resources and professional development are available on state departments of education websites that a teacher of ELs might benefit from? Findings suggest a majority of states link to federal resources. About half of the states provide more robust resources, such as webinars. Approximately two-thirds of states include links to professional resources; however, there is little consistency between the states as to which outside organizations they recommend. There is no correlation between the quantity or quality of a state's resources and the EL population in the state.

Keywords: academic support, social-emotional support, students with limited or interrupted formal education (SLIFE), literacy education and instruction

Over the past several decades, the population of English learners (ELs) has been growing steadily in the United States, and the majority of teachers are now working with ELs in their classrooms (U.S. Department of Education, 2010; Lucas et al., 2018). However, content and classroom teachers in the US not always adequately trained in how to teach and support the ELs or multilingual learners (MLs) they have in their classrooms. If professional development (PD) in general and PD that counts for professional education credit or continuing education unit on ELs is not available to teachers through their schools and/or districts, teachers may seek PD resources on their own. One of the resources they may seek is their own state department of education website.

As literacy teacher educators who train teachers to work in K-12 US public schools, we are aware that a majority of classroom teachers will work in schools with ELs (U.S. Department of Education, 2012) and that a majority of teachers will have ELs in their classrooms (Lucas et al., 2018). We also know that all teachers are responsible for supporting ELs' literacy and language (Bunch et al., 2012). Teachers do not feel adequately prepared to teach ELs (Hiatt & Fairbairn, 2018), which is particularly worrisome given that the EL population in US schools is currently approximately 10% of K-12 students (U.S. Department of Education, 2019). Despite this growth in ELs in U.S. schools, most states do not require teacher education programs to train all or some of the teachers to teach and support ELs. The exceptions are Alabama, Arizona, California, Florida, Indiana, Massachusetts, Missouri, New York, Pennsylvania, Virginia, and Washington (Education Commission of the States, 2020). In addition to not requiring training to work with ELs during teacher preparation programs, PD focused on ELs is scarce for teachers once they begin working. Even in districts with high numbers of ELs, PD hours on topics related to teaching ELs was on average less than 20% of the total hours of PD offered (Boyle et al., 2014). To possibly supplement the lack of PD, teachers are reaching out various online resources and to peers to support their lessons planning (Torphy et al., 2020; Trouche et al., 2020).

Online Professional Development and Resources for Teachers

For this study, we draw from literature that suggests teachers are motivated to explore online resources and online PD by themselves if the resources are easy to navigate, accessible, visually appealing, have quality content and are trustworthy (such as in our study state department of education websites) (Beach, 2017; Beach & Willows, 2014; Duff et al., 2011). Additionally, teachers become involved with other teachers in informal online communities of learning (such as Twitter or Facebook) to support their professional development needs (Lantz-Andersson et al., 2018). Online resources can support teachers in their instructional planning and collaborations with other teachers (Trouche et al., 2020). Online resources and online PD are more and more popular (Bates et al., 2016) and convenient for teachers (Brysch, 2020), and seem to lead to better teacher learning if coupled with a community of practice (Bates et al., 2016; Surrette & Johnson, 2015).

Self-Directed PD

Self-directed learning is conceptualized as "as a means or empowerment to change – change that is purposeful, individual and developmental" (Morris, 2019, p. 640). Teacher PD can be self-directed, which means teachers are in charge of their own leaning by seeking and using resources they find online or by reaching out to peers (Gaible & Burns, 2005). As Gaible & Burns (2005) mentioned teacher self-directed PD should not be the only type of PD teachers are involved in, but

it is an important form in case teachers lack other opportunities for PD through their school and/or district.

Based on data from 55 mathematics and science teacher interviews from Zimbabwe Mushayikwa and Lubben (2009) identified various reasons or "attractors" of self-directed PD:

> …their [teachers'] perceived professional identity, their need for career development, their need for networking, their need to improve subject content knowledge, the need to adapt and integrate materials so as to teach for understanding (PCK), the need to acquire more practical knowledge and skills for the subject discipline and the perceived benefits which they derive from satisfying these needs (p. 382).

Based on observations and interviews with 17 elementary school teachers in Canada, Beach (2017) identified three major motivators: 1) the perceived quality of the website based on who runs the website and the authenticity of resources shared; 2) teachers' current teaching context and the needs of their students; and 3) ease of accessibility at any time on a variety of devices (phone, computer) in contrast to face-to-face structured PDs.

Types of Online Resources

How teachers take decisions and navigate online websites with resources has been closely looked at (Bates et al., 2018; Beach & Willows, 2014). Teachers look for resources on a variety of online websites and social media platforms to support their planning and teaching. Bates et al. (2018) analyzed the website Every Day Mathematics Virtual Learning Community (https://vlc.uchicago.edu) dedicated to elementary math teachers, specifically the resource section that included teaching videos and documents for download. Teachers seemed to access more resources that provided ideas for immediate implementation, resources that were highly rated and accessed by previous users, and resources that had short and clear descriptions (Bates et al., 2018). Using Google Analytics and data mining methodology, Leung (2018) looked at teachers' and administrators' behaviors on an online library of materials (EdHub Library) that includes best practices teaching videos, learning modules, classroom assessment information, and examples provided by the state of Missouri. The findings show that teachers mostly looked at examples of units of study, PD plans, and teaching videos (Leung, 2018). Findings from a survey of 256 teachers in Australia suggest most teachers read research literature from online resources related to their teaching context and that some of the possible barriers in doing so included lack of relevance to their teaching and lack of time (Kostoulas et al., 2019). A significant number of pre-service elementary teachers enrolled in a teacher educator course in Canada (51% of the study participants) reported using Pinterest as an online resource for their literacy instruction because of its convenience, accessibility, and visual appeal (Beach, 2020). Elementary math teachers in the US reported using the internet weekly to find classroom activities for the classroom (Shapiro et al., 2019). Teachers used Teachers Pay Teachers, Pinterest, and Google searches, but teachers with more experience seem to be using websites such as their professional association more to find activities (Shapiro et al., 2019). The literature on teachers in general and physical education and sports coaches, in particular, and their PD using social media platforms suggest benefits of connecting to fellow teachers and sharing resources and ideas (Harvey et al., 2020). Teachers in the US seek online resources found on social media such as Facebook, Twitter, Pinterest, and on YouTube or online newspapers related to their content area and to connect with their peers (Hunter & Hall, 2018). However, social media platforms which offer resources teachers can use in their classrooms present challenges such as practices and materials that are not high-quality (Harvey et al., 2020).

Trustworthy Online Resources

Online resources can be classified according to trust: online resources such as What Works Clearinghouse has its content monitored, thus a trustworthy resource, while other resources that teachers use such as Pinterest or Twitter, do not have that, thus less trustworthy and teachers would need to evaluate the content (Hunter & Hall, 2018). We consider state of department website resources as a trustworthy source (Beach & Willows, 2014) where content is monitored (Hunter & Hall, 2018) and thus as a viable option for resources and self-directed learning for teachers, however, not the only option available.

Shapiro et al. (2019) noted that math teachers searched for classroom activities mostly on websites that are less trustworthy such as Teachers Pay Teachers, Pinterest, and Google Searches. However, more experienced teachers searched and use activities from more trustworthy sources such as professional association websites. However, teachers seem to be motivated and more likely to access sources they perceive have quality resources and are trustworthy (Beach, 2014; Hunter & Hall, 2018).

Purpose

We consider state department of education websites as one option for free resources and open PD opportunities teachers can access in contrast with more structured PDs such as online courses or modules (Bates et al., 2018). In addition, for the US context, because of the pressure of budget cuts in both K-12 education and college education, we are interested in the availability of free resources that can be used by K-12 school districts for PD as well as by college professors as open access resources in their education courses.

Many classroom teachers in US schools are unprepared to teach ELs (unless they pursue additional EL-specific training and/or certification) and yet find themselves challenged to do just that (Ballantyne et al., 2008; Santibañez & Gándara, 2018). The purpose of this study was to investigate and describe the online resources and PD available on the 50 US states and the District of Columbia publicly available department of education websites related to ELs or MLs that can provide teachers who have no formal EL training some guidance on how to effectively instruct ELs. We recognize that there are additional online free resources for teacher besides the department of education websites, but those addition resources are out of the scope of this study. Our research question was: What type of resources are available on state departments of education websites that a teacher of ELs might benefit from?

Methods

This is a mixed method study that looked at content on state departments of education websites from the 50 US states and District of Columbia. We are both language and literacy teacher educators with teaching careers in K-12 public schools teaching ELs. Our purpose in structuring the study this way was to find what information would be quickly and easily available to teachers needing assistance with ELs in their classroom. We did our search and coding of the state department of education websites between January and March 2020. It is beyond the scope of this study to look at updated websites after we closed our data collection and analysis.

Our preliminary exploration consisted of examining 10 randomly chosen state department websites using a random number generator and a list of the 50 states and District of Columbia to explore the content and resources available, and to create thematic codes. After meeting and discussing

these codes, we created a formal codebook and then re-analyzed the same 10 states using these codes.

There were three main categories: federal resources, state resources, and other resources. We separated federal from state resources as each of the states have their own standards and educational policies and laws. Federal resources included items such as the English Learner Toolkit, a document written by the U.S. Department of Education that provides guidance on teaching ELs, as well as information from the Civil Rights Office, that provides information about the rights of ELs. State level resources included materials teachers would be required to use with students (such as home language surveys that identify possible ELs in the state, EL program entry and exit assessment requirements, and language standards) as well as any additional materials related to ELs. We were especially interested in the availability of online resources and PD, specifically webinars, interactive learning modules, and handouts from in-person PD sessions that a teacher could use to learn more about working with ELs. Lastly, we looked at "other" resources. This included specifically looking for organizations that focus on ELs, such as Colorín Colorado, a website focused on providing information and activities for teachers and families of ELs; TESOL International Association, the largest professional association of teachers who teach English to speakers of other languages, which has both resources and PD opportunities; National Association of Bilingual Education (NABE); Center for Applied Linguistics (CAL), which provides resources for EL education; WestEd, which conducts and shares research and resources for education; as well as coding for any additional resource that may be available.

After creating and checking our code, we then coded the remaining 40 states and District of Columbia. We coded with a 1 if the resources were on the website or if there was a direct link to those resources and a 0 if the resources were not available. The PD and webinars were coded a 1 if they were readily available on the website and free for anyone who visited the website. We coded a 0 if the resources required a log in with a school ID or a log in for teachers in that state only. Each state was coded by both researchers, and we would meet to discuss our coding. If there was a disagreement in coding, we rechecked the website. If the resource was not easily re-found after 5-10 minutes of searching, we coded it a 0.

Next, we added in our database the percentage of public-school students who were ELs in each state (Hussar et al., 2020) to examine if resources varied by the extent public school teachers were expected to work with these students. We created a scatterplot looking at the relationship between these two variables (see Figure 1), and using the median values of each, created four typologies: high quantity resources, high percentage of ELs; high quantity resources, low percentage of ELs; low quantity resources, high percentage of ELs; low quantity resources, low percentage of ELs (see Table 1). In addition, we calculated the Pearson's correlation coefficient between the percentage of ELs in each state and the number of PD and other resources, to further examine if there was a relationship between the population of students and the resources provided by each state.
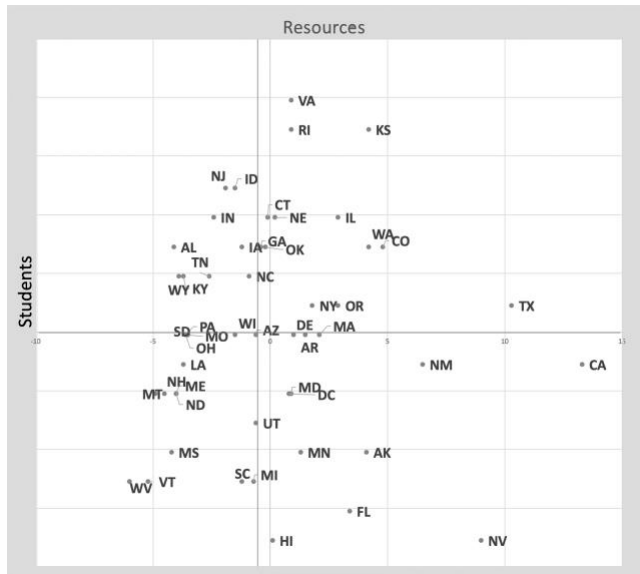
Figure 1. Relationship between State Level Resources & Percentage of ELs

Table 1: State Level Resources & Percentage of ELs.

Low Resources, High EL %	High Resources, High EL%	
Alaska	Arizona	Nebraska
California	Arkansas	New York
Florida	Connecticut	Oklahoma
Hawaii	Colorado	Oregon
Maryland	Delaware	Rhode Island
Minnesota	Georgia	Texas
Nevada	Illinois	Virginia
New Mexico	Kansas	Washington
Utah	Massachusetts	
District of Columbia		

Low Resources, Low EL %	High Resources, Low EL%	
Louisiana	Alabama	North Carolina
Maine	Idaho	Ohio
Michigan	Indiana	Pennsylvania
Mississippi	Iowa	South Dakota
Montana	Kentucky	Tennessee
New Hampshire	Missouri	Wisconsin
North Dakota	New Jersey	Wyoming
South Carolina		
Vermont		
West Virginia		

Lastly, we conducted an in-depth case study of four states to examine the quality of resources provided. We randomly selected one state using a random number generator from each typology to explore: Massachusetts (high quantity resources, high percentage of ELs); Alabama (high quantity resources, low percentage of ELs); Maryland (low quantity resources, high percentage of ELs); and Mississippi (low quantity resources, low percentage of ELs). To analyze quality of resources, we looked at the content of the website, with a specific focus on resources that can be

used for instruction; intended audience for the resources; and organization and visual appeal of the website.

Findings

Quantitative Findings

Table 2 shows our findings from our analysis of the state department of education websites. The majority of states (90%) directly link to some kind of federal resource. This is usually civil rights information (67%) or the English Learner Toolkit (67%). Less often did state departments of education make the Newcomer Toolkit (47%) or the Family Toolkit (18%) available. The difference between what resources are shared and which ones are left off on different state websites is a question we did not explore and it would be interesting to investigate. Lastly, state departments of education often provided links to other federal resources, including information about ELs in Every Student Succeeds Act (ESSA) or direct link to Office of English Language Acquisition (OELA), the federal office that provides resources and guidance for EL education.

Table 2. Percentage of Resources Available on State Department Websites.

Federal Resources		State Resources		Other Resources	
Federal resources	90%	State resources	100%	Other resources	67%
Civil Rights information	67%	PD webinars or learning modules	51%	¡Colorín Colorado!	29%
English Learner Toolkit	67%	PD handouts or presentation notes	51%	Center for Applied Linguistics (CAL)	29%
Newcomer Toolkit	47%			TESOL	25%
Family Toolkit	18%			NABE	24%
Other federal resources	73%			WestEd	9%
				Other resources, not specifically named above	63%

Note. URLs for resources can be found in the appendix.

All states have state-level resources (100%), and these include items like home language survey, entry/exit assessment information, and program information that are required for administration of an EL program. About half the states offer some kind of PD for teachers to learn more about how to teach ELs (51% have webinars or interactive modules and 51% have handouts or notes from presentations). However, 20 states offered both types of resources, 12 had either webinars or handouts but not both, and 19 states offered none, showing that the distribution of these types of resources across states was uneven. Additionally, there was no correlation, $r(49) = 0.1804$, p = .0251 between the population of ELs in the state and the availability of PD resources. For example, neither California, with ELs comprising 20.2% of public-school students, nor Nevada, with 15.9% ELs, offered any type of state-level PD other than resources for teachers. In contrast, South Dakota made both webinars and presentation handouts available, with an EL population of only 3.4%.

The majority of states (67%) included links for other resources; however, there is little consensus among the states which resources to provide. For each resource, with the exception of WestEd, approximately 20-30% of states link to the specific resources we chose as important for EL teachers to know about, such as Colorín Colorado or CAL. However, on average each state linked to just one of those resources. Only two states, Rhode Island and Virginia, linked to all five outside

resources on our list, while an additional six other states linked to four of the five specific resources, with WestEd typically the resource omitted. Seventeen states did not link to any outside resources at all, and similar to offering PD resources, this category of resources was not correlated with percentage of ELs in the state, $r(49) = -0.0125$, p = 0.9308.

Qualitative Analysis

Although states varied greatly in the quantity of resources available, we also wanted to examine the quality of resources available in relation to the percentage of ELs in the state. We defined high quantity resources as at least half of the 16 different types of resources identified being present. We thus chose four representative states based on our data to explore: a state with high quantity resources and high percentage of ELs, high quantity resources, low percentage ELs, low quantity resources, high percentage of ELs, low quantity resources, low percentage of ELs.

Table 3 synthesizes the results of the qualitative analysis and shows the quality of content. We defined a website with high quality resources as a website that includes resources that address a variety of topics related to ELs, such as instructional strategies, language proficiency standards, model lesson plans, teacher and leadership networks, and EL entry and exit requirements. In our qualitative analysis of the websites we also identified the primary audience and ease of navigation for each of the four case study states. The quality of resources was mixed, with two states providing high quality materials and two states providing mixed quality materials. Quality of materials was not related to quantity of materials; Massachusetts provided both high quantity and quality of resources while Mississippi provided a low quantity of resources but the ones there were evaluated as high quality materials. All four focus states primarily targeted their materials to classroom teachers; although some sites did have links specifically for parents/guardians and/or school administrators, in most cases the materials were available to be used by classroom teachers. Lastly, ease of navigation was mixed – two states had easy to use sites and two states were extremely difficult to navigate to find useful PD materials.

Table 3. Qualitative Analysis of Target States.

	Massachusetts (high resources; high % ELs)	Alabama (high resources, low % ELs)	Maryland (low resources, high % ELs)	Mississippi (low resources, low % ELs)
Content Quality	High	Mixed	Mixed	High
Primary Audience	Teachers	Teachers	Teachers	Teachers
Organization	Easy to navigate	Difficult to navigate	Difficult to navigate	Easy to navigate

Massachusetts (high quantity resources, high percentage of ELs)

The Massachusetts Department of Education provided a high quantity of resources (8 out of 16 possible kinds of resources) and has a high percentage of ELs (9%) in comparison to other states (Hussar et al., 2020). The variety of resources are accessible through a left-hand side menu navigation. The resources are organized in 10 different categories as follows: blueprint and vision, programs, program resources, program monitoring and compliance, ESL instructional support, leadership networks, ELs with disabilities/special education, students with limited or interrupted formal education, family resources, and guidance and laws. The blueprint and vision include

principles and tools for educating ELs in Massachusetts and provides a framework and documents for implementation and monitoring of EL success.

In terms of programs, the website includes descriptions and guidance documents for Sheltered English Immersion (SEI), Dual Language Education (DLE), Transitional Bilingual Education (TBE). The program resources page is divided into Resources for Districts (such as home language surveys, letters to parents, and transfer letters in different languages); Resources for Program Implementation and Evaluation (such as language proficiency benchmarks); Resources for Monitoring and Compliance (such as findings from program reviews of districts and documents for program monitoring); Instructional Support Resources (such as collaboration tools, model ESL units with videos and the unit plans, and other resources such as links to the Understanding Language website and to English development standards from the World-Class Instructional Design and Assessment (WIDA) consortium). The Leadership Networks share documents with list of state-wide networks of school organized by proportion of ELs in the district. The ELs with disabilities/special education tab features video and document resources and website links. The page that focuses on students with interrupted and formal education (SLIFE) includes a definition of SLIFE, guidance documents, and sample screeners and interviews. The Family Resources includes links to organizations that can support families as well as a drop-down menu with information about parent networks in different languages. The last link of the left-hand side menu is Guidance and Laws which has a variety of documents and links about the rules and regulations related to ELs in Massachusetts.

The list of resources available on the website is impressive and the organization allows for ease of navigation. What could be cumbersome is that the documents need to be downloaded to be viewed.

Alabama (high quantity resources, low percentage ELs)

The Alabama Department of Education provided a high quantity of resources (11 out of 16 possible kinds of resources – see Table 1) and has a low percentage of ELs (2.8%). Quality of resources was mixed. The primary resource is a collection of archived professional development presentations on a variety of topics, which included teacher trainings on topics such as EL student identification, progress monitoring, and WIDA standards. Other archived presentations include classroom activities, such as articles on various topics, such as volcanoes, in English and Spanish. However, the archived presentations are not organized well and time consuming to sort through, and do not seem very beneficial for teachers who were not present at the professional development.

In addition to the archived professional development, the Alabama Department of Education includes a variety of other information for teachers on WIDA standards and ACCESS assessments. Although there are a few resources labeled for parents and administrators, the intended audience for most of the resources are classroom teachers.

Although there was a large number of resources, the organization and ease of navigability for this site was low. Many links go to outside resources that left the internal department of education website. Thus you had to either come back to the original website by clicking the back button in your browser or had to open multiple tabs, which can be difficult to manage. The content of the archived professional development presentations were not clearly labeled thus difficult to navigate and know where you were.

Maryland (low quantity resources, high percentage of ELs)

The Maryland Department of Education provided mixed quantity of resources (6 out of 16 possible kinds of resources) and has a higher percentage of ELs (7.8%). The website was divided in a main page and two menus, one on the left-hand side with five tabs and one on the right-hand side with three categories of links: Maryland Resources, Quick Links, and Resources. The variety of places where resources and information are placed on the website makes the navigations difficult and confusing at times. The placement of resources and information in different places and links on the website lead to a difficult and confusing navigation.

The Home page has a description of the program and contact information; English Learners: Eligibility, Guidance, and Laws which includes information about ESSA and links to Maryland home language survey; parent notification letters and refusal for services, in different languages; and state laws about ELs. The English Language Proficiency Assessment (ELPA) tab features information about the language Proficiency Assessment used in Maryland, ELPA, and information and a link to the accommodations manual as well as Maryland regulations related to assessment. The tab EL-non-public participation takes you to a page which has one paragraph statement about ESSA and funds.

The Maryland Resources includes links to a Seal of Biliteracy page with information, a video about the program, and additional links on the left-hand; EL at-glance numbers and languages and growth over the last 10 years which features documents that open in a new tab; and two guides for school and family one in English and one Spanish which were labeled as new with a date of July 2020. The Quick links takes you to the Maryland home language survey, parent notification letters and refusal for services, in different languages, which are documents also found in the English Learners: Eligibility, Guidance, and Laws tab on the right-hand side. This tab also has a right hand-side menu with external website links such as WIDA, Colorín Colorado, Understanding Language, and ESSA.

Mississippi (low quantity resources, low percentage of ELs)

The Mississippi Department of Education provided a low quantity of resources (4 out of 16 possible kinds of resources) and has a low percentage of ELs (2.7%). Although there were not many resources – notably there were very few federal resources and no links to outside organizations – the state provided resources were high quality. The primary resources available were a set of five webinars on literacy (comprehension, vocabulary, fluency, phonological awareness, and phonics) and a training on how to identify ELs. They also included documents for teachers to use in planning instruction, such as communication cards and sentence stems, and progress monitoring checklist for classroom use. Although there was a parent guide available, the intended audience for the majority of resources was classroom teachers.

Although the Mississippi Department of Education provided limited resources, they were high quality. In addition, the site was well organized, easy to navigate, and a teacher could quickly find the information they were looking for on the site.

Discussion and Conclusion

Our goal with this research was to mimic a US classroom teacher who does not have much training in teaching ELs but who finds themselves working with ELs in their classroom (Ballantyne et al., 2008; Santibañez et al., 2018). Given the growing ELs in the United States (U.S. Department of Education, 2020), the lack of focus on ELs in teacher preparation (Salerno & Lovette, 2012), and

the perceived lack of preparedness to teach ELs (Hiatt & Fairbairn, 2018), we estimate that this scenario happens across the country quite often. The purpose of this study was to investigate the resources available to those teachers who wanted guidance and information on working effectively with the ELs, and we targeted state department of education websites as a natural starting point for teachers who want PD on this topic.

Our results show that although all states had some type of information on ELs available on their websites, there was large variability in both the quantity and quality of materials available for teachers. This variation was not correlated with the percentage of ELs in the state. In addition, an in-depth case study of four states showed that there is little consensus between states in the type of information and PD offered for teachers who want to learn more about working with ELs. Given that still not enough classroom teachers are specifically trained to work with ELs (Salerno & Lovette, 2012; Education Commission of the States, 2014), the availability of online resources for teachers who wish to develop more knowledge and expertise in working with ELs is an important policy issue since so many teachers turn to online resources for information (Beach, 2017). The issue of classroom teachers who lack the specific knowledge to work with ELs is particularly concerning since research shows learning outcomes for ELs are influenced by a variety of factors within teachers' control, including using more conceptually demanding instruction (Blazar & Archer, 2020; Saxe & Suisman, 2019) that leverages students' knowledge and culture. Our research identified three main areas for concern in evaluating online resources: lack of consistency between states in the types of resources available; lack of quality in the PD materials, if even available; and a lack of organization on the websites.

State Department of Education Websites

There was little to no consistency between the state websites on the types of resources offered for EL teachers. Since so much of education policy, such as learning standards, curriculum, and assessments, are decided at the state level, we believe it is likely that a teacher would turn to their own state's education department website when looking for resources. The lack of consistency between the states means that teacher across the country have vastly different access to resources that may be beneficial for their own learning. For example, the website Colorín Colorado, one of the more trustworthy resources for EL families and educators, is only featured on 29% of state department websites. More troubling, however, is the fact that many states with high EL population do not have websites with resources that could benefit teachers of ELs, potentially leaving the teachers who need resources the most with little helpful information.

The second issue we noted was lack of quality resources, in particular surrounding PD opportunities such as webinars and handouts. This is troubling because prior research showed that teachers primarily look for units of study, PD plans, and teaching videos when accessing online resources (Leung, 2018), and when teachers turn to state department of education websites the materials they find will be lacking in quality. Additionally, Beach (2017) identified that teachers are motivated to explore resources based on the authenticity of resources that share real classroom examples, and practical, ready-to-use information and materials which, as we found, were not readily available on state department of education websites.

Lastly, we noted that most state department websites were very clunky and difficult to navigate. It was hard to find the resources or identify the way the content was organized, making them very user un-friendly, and thus possibly less likely to be used. Online resources that are easily accessible and visually appealing are more likely to be explored (Beach, 2017; Beach & Willows,

2014) and this is how the state department of education should be. As researchers with extended time to dedicate to research, we had difficulties navigating the sites on multiple occasions due to the organization, the titles of the tabs and/or the diversity of links that were outside the websites. We also expect that time-pressed teachers would not put in the same effort as we did to hunt down the needed information and resources.

Limitations

There are several limitations to our study. First, the study focused on US states only. It is beyond the purpose of our work to investigate and describe the context of other countries that serve ELs in their schools such as Canada or UK. However, doing a cursory review, education in Canada is the responsibility of ten different provinces and territories, each with its own websites and resources available (The Canadian Information Center for International Credentials, 2021). In the UK, the UK government website includes information about the English to Speakers of Other Languages regulations (UK Government, n.d.) as well as national curriculum documents (UK Department of Education, 2014).

Second, we may not have located all the resources available. Each state department organizes their websites differently and information regarding ELs is not always clearly labeled or easily found. Although we tried to ensure we found all resources by searching the websites several times and exploring multiple pathways to find information on ELs we may have missed some links. Additionally, data was collected between January and March 2020 and state department websites were changing rapidly due to the COVID-19 disruption to education. Therefore, we tried to limit our analysis to more general EL resources and did not examine the COVID-19 specific guidelines and resources states were adding to their sites. Lastly, we have no data on how often these sites are accessed by teachers nor any data on how often the resources provided may be utilized in the classroom. This is a particularly important concern given that even if a state invests the money to produce high resources for teachers, they may not have the full effect if very few teachers know or use them.

Although states may differ relative to programs and how EL education is implemented in their particular state, the knowledge and skills teachers need to successfully support the ELs in their classroom cut across state lines. Access to high quality online resources on state department of education websites – in all states – is an important policy change that would support teachers in their professional development. This is particularly important for ELs who reside in rural areas, where there is both limited school resources and difficulty in hiring and retaining trained EL teachers (Coady, 2020), and where online access to PD may be their only option for high-quality resources.

This research suggests several policy recommendations that would support teachers' development of expertise in working with ELs through access to online resources. First, developing both common or national and state-specific quality PD is important. More general resources, such as PD that focuses on effective practices to teach decoding, fluency, and comprehension in reading to ELs, as well as state-specific resources, such as tying the reading instruction to specific state standards and curriculum goals, would facilitate development of teacher knowledge and expertise in a state-specific context. Secondly, sharing of high-quality webinars and curriculum materials that focus on non-state specific EL instruction between the states would allow state departments to offer more robust online resources and increase teacher access to these materials. Lastly,

national organizations could work to coordinate a more coherent message around professional development opportunities for teachers.

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Appendix. EL Resource Websites

Resource (in alphabetical order)	Link
Center for Applied Linguistics (CAL)	https://www.cal.org/areas-of-impact/prek-12-el-education/
Colorín Colorado	https://www.colorincolorado.org
English Learner Toolkit (US Department of Education, Office of Second Language Acquisition)	https://www2.ed.gov/about/offices/list/oela/english-learner-toolkit/index.html
Family Toolkit (US Department of Education, National Clearinghouse for English Language Acquisition)	https://ncela.ed.gov/files/family_toolkit/EL-Family-Tool-Kit-All.pdf
National Association of Bilingual Education (NABE)	https://nabe.org
Newcomer Toolkit (US Department of Education)	https://www2.ed.gov/about/offices/list/oela/newcomers-toolkit/ncomertoolkit.pdf
TESOL International Association	https://www.tesol.org
WestEd	https://www.wested.org