Less Common Languages, Common Needs for K-12 Instructors

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Abstract

This study sought to understand the needs of U.S. K-12 teachers as they guide students learning languages with non-Roman writing systems, which we have termed "Languages with Diverse Written Representations (LDWR)." While there is a growing body of research on the teaching of languages that do not use the Roman alphabet in the United States, relatively little research has looked in the K-12 context and across languages to find shared needs. However, some commonalities emerge in K-12 instructors' experiences and challenges.

This paper describes exploratory focus group research conducted with instructors of Arabic, Mandarin, and Russian in Massachusetts elementary, middle, and high schools. Discussion showed that K-12 instructors working with

languages that do not use the Roman alphabet form a coherent group with unique needs and challenges related to use of standards for world languages and finding and applying appropriate resources.

Keywords: non-Roman alphabet; logographic languages; K-12 education; standards-based education

Introduction

The study presented in this paper sought to understand the needs of U.S. K-12 teachers as they guide students who are learning languages with non-Roman writing systems. While these students may come from diverse first language backgrounds, they have received literacy instruction in English, and thus usually need to develop novel reading and writing skills as they work to acquire proficiency in the target language. This paper presents teacher focus group data from a project completed in 2020 for the state of Massachusetts and uses its findings to demonstrate the utility and meaningfulness of this grouping of instructors of varied languages and to discuss themes that may inform work in other contexts. The research was conducted as part of a project to advise the Massachusetts Department of Elementary and Secondary Education on its new World Languages Curriculum Framework, which was released in spring of 2021. The Department requested that the researchers conduct one round of focus groups to solicit feedback on the framework; perform a literature review of best practices for world language instruction in specialized content areas, including languages with non-Roman writing systems; conduct a second round of focus groups to solicit feedback on the literature review; and

create Quick Reference Guides for teachers in these content areas.

This research found that, despite the differences between the various languages with non-Roman writing systems and their orthographies, the teachers had specific needs in common. First, teachers needed additional support to supplement the state's world language standards. Teachers also expressed a need for additional research about teaching strategies for new writing systems and additional teaching materials in the target language. Finally, the focus group discussions identified a need for professional networks to share resources and practices. In light of these commonalities, the term "Languages with Diverse Written Representations" (LDWR) was proposed to describe this group of languages. While less commonly taught language (LCTL) is a useful category for grouping languages with similar characteristics with respect to how they are taught and learned in a U.S. educational context, grouping languages that use non-Roman writing systems can provide further support for addressing some of the common challenges and issues teachers face across these languages.

Background

Standards-based education reform in the United States has greatly influenced approaches to language teaching and learning over the past few decades (Cox et al., 2018), but research about language-specific standards and applicability of general world language content standards for LDWRs is limited. In a report on the influence, impact, and future directions of the national ACTFL standards, Phillips & Abbott (2011) found that the standards had a greater impact on commonly taught languages than less commonly taught languages as measured by references in professional literature. Wang (2009) has called for more language-specific resources, instructional materials, and performance descriptors to aid educators of less commonly taught languages in effectively implementing world language standards. Magnan et al. (2012) surveyed first-semester language students at the University of Wisconsin-Madison and found that LCTL students shared the goals of the ACTFL standards to a greater extent than CTL students, and LCTL students more highly valued the Cultures and Connections standards. As a result, the researchers encouraged continued development of specific standards for LCTLs and CTLs (Magnan et al., 2012). Lü & Lavadenz (2014) found that novice native speaker teachers of Chinese were highly aware of and in agreement with the ACTFL standards,

but classroom observations indicated a need for more support in implementing standards-based instruction. As of 2019, 14 states had language-specific standards, including two with standards for LDWRs (Arkansas: Chinese, Japanese, and Russian; Indiana: East Asian Language High Level) and two (Georgia and Indiana) with standards for native or heritage speakers that do not specify a language (Center for Applied Linguistics, 2019). Many world language standards documents also lack information about teaching a new writing system, which is a critical consideration for teachers of LDWRs. The ACTFL language-specific standards for Arabic, Chinese, Hindi, Korean, and Russian (The National Standards Collaborative Board, 2015) do not provide suggested strategies for teaching new writing systems. The Hindi standards simply state that students will be able to write in Devanagari script at the Novice level, while only the Japanese standards provide information about introducing characters (kanji) in their proficiency progressions.

Many LDWRs are considered languages of national importance to United States security and global engagement (U.S. Department of State, n.d.). Of the more than 60 "Critical Languages" listed by the National Security Education Program, over half do not use the Roman alphabet (Defense Language and National Security Education Office, U.S.

Department of Defense, n.d.). English speakers face several challenges when learning a new language with a non-Roman writing system, including (1) recognizing and memorizing new alphabets, characters, and/or symbols; (2) understanding how sounds and meanings are represented in the language; (3) learning new vocabulary; (4) understanding linguistic norms and rules; and (5) applying new knowledge to reading and writing in the language (Brosh, 2020). In addition to the general difficulties associated with learning a new writing system, students are further challenged by the need to learn different varieties, registers, and dialects associated with these languages (Godwin-Jones, 2013). While LDWRs are among the less commonly taught languages in the United States, their enrollment is growing (American Councils for International Education, 2017).

Despite increased awareness of the importance of these languages and the challenges of learning them in the United States context, educators of LDWRs have limited access to resources, support, and training opportunities (Wang, 2009). Most studies related to learning new writing systems are focused on English rather than LDWRs (Nam, 2018; Rose, 2019). While research on approaches to literacy development and instruction in other writing systems is growing (Hammad, 2019; Li & Tong, 2020; Xu et al., 2013; Xu et al., 2014), the

studies are often conducted in the university context and reflect practices of highly trained researchers, while research on classroom practices of K-12 in-service instructors is more limited (Lü & Lavadenz, 2014). In addition, many of the instructional approaches that are commonly discussed in the literature on world language education do not address the needs and diversity of LDWRs (Funder Hansen, 2010; Reilly & Radach, 2012). Everson (2011) discusses best practices for teaching Chinese, Japanese, Arabic, and Hebrew, but recommendations for general exercises that can be used to increase literacy skills may not address instructors' needs for highly specific examples and guides.

Blankenship & Hinnebusch (2013) reviewed academic and government sources of digital materials for teaching less commonly taught languages and found that several LDWRs lack script tutorials, including Korean and Russian. Kissau et al. (2012) interviewed teachers in immersion and traditional programs and found that immersion teachers believed that there is a lack of materials designed for English-speaking students in Chinese, French, and Japanese immersion programs. Their interviews also found that Chinese and Japanese teachers may believe that their languages require greater focus on writing than what is recommended by their schools or programs (Kissau et al., 2012). Novice K-12

Chinese teachers surveyed and interviewed by Lü & Lavadenz (2014) expressed a desire for more language-specific pedagogical strategies that could be practically applied. Other researchers, speaking about LCTLs more generally, have noted that most of these languages have limited well-designed resources, including accessible and appropriate textbooks and other instructional materials (Godwin-Jones, 2013; Gonulal et al., 2016). Everson (2011) also calls for better materials for LDWR teaching, such as Chinese textbooks that incorporate information about characters' components and etymology. Recent research on Emergency Remote Teaching during the COVID-19 pandemic found that Chinese as a Foreign Language teachers expressed a strong desire for language- and topic-specific resources and professional development, including information about using technology to support literacy (Xu et al., 2021).

In the United States, LDWR teachers are often the only teachers of their language in K-12 schools, leading to professional and even physical isolation (Chen, 2010; Knight, 2020; Schrier, 1994). The COVID-19 pandemic has increased teachers' physical isolation, but the increased use of online collaboration has the potential to reduce their professional isolation if they can establish robust professional networks (Knight, 2020). Researchers on Chinese programs in Australia

also found that teachers in the most effective Chinese programs have strong professional networks (Moloney & Xu, 2018). Lü and Lavadenz (2014) argue that "the Chinese teaching profession would benefit from creating public reflective spaces for language teaching knowledge and practice" (p. 648). Teachers are also more likely to participate in professional development, and this professional development is more effective, when they have stronger social or professional networks with other participants and the content is relevant to their subject areas (Bigsby & Firestone, 2017; Darling-Hammond et al., 2017). Thus, LDWR teachers may benefit personally and professionally from increased networking opportunities.

The literature thus shows that although LDWRs are important languages within the United States, teachers of these languages remain underserved. The teachers in the present study identified several areas of need in their contexts that are supported in the literature, although few previous studies have recognized the common needs among teachers of different LDWRs in the U.S. K-12 setting.

Methodology

The researchers convened two sets of focus groups, in June and November 2020, as part of the project to advise the Massachusetts Department of Elementary and Secondary Education on its new World Languages Curriculum Framework. Focus groups are a technique for interviewing a small number of people via a guided discussion (Krueger & Casey, 2015, recommend five to eight participants). The discussion format lets participants direct the focus of the discussion in a way that is not possible with a questionnaire and that generates additional data (Krueger & Casey, 2015). This exploratory, qualitative research was intended to solicit ideas for materials development, although as other researchers have noted, the discussion among participants generated additional data about needs and concerns within this group.

The first focus group was convened to discuss the applicability of the new Massachusetts World Languages Curriculum Framework to the teaching of these languages. At the time, the term "non-alphabetic languages" was used to refer to this set of languages. After this focus group, the Department expressed concern that terms like "non-alphabetic languages" or "less commonly taught languages" did not appropriately or inclusively describe all of these

languages. Other terms in use such as "logographic languages," "non-Roman alphabet languages," and "character-based languages" seemed similarly inaccurate or awkward and did not represent the variety of scripts used in some languages. The project team therefore agreed to use the Department's suggested term of "Languages with Diverse Written Representations" and to present it to the teachers in the second focus group for review. This second focus group was convened to discuss literature review findings on best practices for teaching and learning LDWRs and make recommendations for a Quick Reference Guide that would help teachers of LDWRs implement the new Massachusetts world language content standards.

To solicit content advisors for the focus groups, the Department reached out by email to the state's world language teachers. All teachers with relevant experience were considered for participation, and respondents were selected to participate in both rounds of focus groups as availability allowed. The participants in the second focus group were therefore a subset of the participants in the first. Table 1 shows the background and attendance of participants in both focus groups.

Table 1. Focus Group Participants' Backgrounds and Attendance

Participant	Language Taught	Grade Level(s) Taught	Focus Groups Attended
1	Russian	Elementary (previously university and high school)	1 & 2
2	Mandarin	Middle school	1 & 2
3	Arabic	Grades 8-12	1 & 2
4	French (native Farsi speaker)	Grades 7-12 curriculum supervisor; AP and post-AP teacher	1
5	Mandarin	Grades 6-8	1

The focus groups were led by a facilitator while a note-taker captured the discussion; the sessions were not audio or video recorded. Each focus group meeting lasted about 90 minutes, and participants received professional development credits from the state for taking part in the sessions. The focus groups were conducted virtually using Zoom videoconferencing software. The focus groups followed a semi-structured format, in which participants were asked a series of questions but were encouraged to elaborate and discuss other topics as they arose. Two weeks prior to the first focus groups, participants received the draft of the Massachusetts World Languages Curriculum Framework. One week prior to the second focus group, participants received the LDWR section of the literature review.

During the first focus group, participants were asked about (1) their familiarity with and use of the national ACTFL

standards; (2) any shortcomings of the ACTFL standards for their teaching context; (3) their impressions of the Massachusetts World Languages Curriculum Framework; and (4) whether they believed the Massachusetts framework to be relevant and applicable to their teaching context. In the second focus group session, participants were asked to react to the following topics covered in the literature review: (1) relevant factors for English speakers learning LDWRs; (2) alphabets, characters, and symbols; (3) reading and writing; and (4) phonology and tonal pronunciations. For each topic, participants were asked to consider what stood out from the findings, how the findings compared to their specific teaching experiences, and anything not included that they deemed important to the teaching and learning of LDWRs.

After each focus group, the facilitator and note-taker discussed the session and summarized major themes that had emerged during the discussion. Subsequently, the researchers qualitatively analyzed the notes from each session and refined their understanding of the themes to produce reports for the Massachusetts Department of Elementary and Secondary Education and to inform the development of the Quick Reference Guide for LDWRs. This paper presents a synthesis of thematic results that emerged across both focus group sessions. While the guiding questions in the first focus group

may have driven discussion of how teachers of LDWRs apply world language standards, other themes arose from participants' interactions and elaborations.

Findings and Discussion

Applicability of General World Language Standards

The first focus group emphasized the importance of standards application for teachers of LDWRs. Participants noted that K-12 instructors of less commonly taught languages tend not to use a textbook to guide instruction, as there often are no textbooks available that are appropriate for their contexts. Participant 3, who teaches grade 8-12 Arabic, said, "My curriculum is based on the ACTFL standards. I think that less commonly taught languages tend not to use a textbook as the base." This was echoed by other participants, including Participant 4, a native Farsi speaker and grade 7-12 curriculum supervisor, who said that "teachers use the standards from the get-go as they start planning." Given the way that teachers of LDWRs apply and use world language standards, they requested user-friendly versions of standards to guide their work.

This reliance on standards to create curriculum means that any critical areas not addressed in frameworks or addressed in a way that does not apply to their context require more effort for teachers of LDWRs to overcome. The focus group's participants saw some gaps in the revised Massachusetts World Languages Curriculum Framework as particular to LDWRs. For instance, any standard that refers to "cognates" is inapplicable for most, though not all, LDWRs. Participant 3, a grade 8-12 Arabic teacher, and Participant 4, a native Farsi speaker and grade 7-12 curriculum supervisor, noted similarities between their writing systems and the challenges this can cause for students, including spelling and matching written words to spoken words:

> Participant 3: How does teaching the alphabet fit into this? There should be a caveat that when students are learning a new writing system at the beginning of their language studies, anything read or written will be slower than speaking or listening. The standards have things at Novice Low that my students can do in speaking and listening, they can't do it yet in reading and writing. They don't know the whole alphabet. Those skills develop much more slowly through their Novice development. The standards as a whole don't need to change but they should recognize that difference in development.

In addition to guidance in standards about teaching writing, participants believed that the standards related to culture did not adequately address the needs of Novice learners of LDWRs. Participants mentioned a need to discuss and overcome stereotypes and cultural misunderstandings, which they thought was "true for all of our languages because the cultures are seen as 'more foreign' than, say, French or Spanish," as Participant 3 (grades 8-12 Arabic) explained. Several participants emphasized that the linguistic and cultural distance between English and LDWRs makes it difficult to provide comprehensible cultural input for these learners at the Novice level:

> Participant 5 (grades 6-8 Mandarin): I think in my practice, all the Novice standards are applicable. But some are hard to make happen, like using the target language almost exclusively. That's too difficult for Novice Low and Novice Mid. If you're explaining a festival related to a religion that students have no knowledge of and no connection to their prior knowledge, no matter how much comprehensible input, pictures, or scaffolding you provide it's almost impossible for students to comprehend.

Participants stated that the Massachusetts World Languages Curriculum Framework did not specify what varieties of language should be taught, which they believed was important for their languages. Participant 4, a native Farsi speaker and grade 7-12 curriculum supervisor, wondered, "For languages like Farsi with formal and informal varieties, which one do we want students to show mastery of? How a family talks vs. a TV broadcast—this choice has cultural implications." This was echoed by Participant 3, a grade 8-12 Arabic teacher, who explained that "to be truly communicative in Arabic, you need familiarity with both standard and dialect."

Some teachers of LDWRs have large numbers of heritage speakers in their classes, such as Participant 5, a grade 6-8 Mandarin teacher, 20% of whose students are heritage speakers. A common definition of a heritage speaker is "a student who is raised in a home where a non-English language is spoken, who speaks or merely understands the heritage language and who is to some degree bilingual in English and the heritage language" (Valdés, 2000). Participant 1, an elementary school Russian teacher, stated that the identification, levels, and needs of heritage learners are "a weak point in the ACTFL standards" and requested more guidance in addressing this population's needs.

Overall, participants had positive opinions of the ACTFL standards and the new Massachusetts World Languages Curriculum Framework, which are both proficiency-based standards for world language education. Participants suggested that teachers of LDWRs may rely more on standards frameworks than teachers of more commonly taught languages because of a lack of textbooks. While user-informed development of standards as well as provision of implementation guidance and supplementary materials can benefit teachers of Roman-alphabetic and more commonly taught languages, participants noted several ways in which world language standards can be improved to reflect the realities of teaching LDWRs. Participants also suggested a need for guidance in order to successfully implement the Massachusetts World Languages Curriculum Framework in their context, given the challenges shared by teachers across these languages of teaching a new writing system, bridging potentially larger gaps in cultural knowledge, and addressing the needs of heritage language learners.

Research and Resources

A second common theme for the participants that emerged in both focus groups was the lack of access to and awareness of resources for K-12 instruction in their languages,

as well as issues with the applicability and practicality of available resources. In the first focus group, the participants specifically noted a lack of textbooks and other resources, resulting in teachers creating their own curriculum and materials, including assessments. One concern, from Participant 4, a native Farsi speaker and grade 7-12 curriculum supervisor, was that a lack of an "end assessment" made it difficult to "know what we're preparing students for using these standards." The lack of appropriate materials places additional, time-consuming obligations on teachers of LDWRs. Participant 4 noted that teachers must make their own materials and described this process as "very hands-on." Participant 1, an elementary school Russian teacher, stated more strongly, "If you make your own resources, that's many hours of your own time." Although participants reported having limited time for resource development, their participation in the focus groups demonstrates their active involvement in and dedication to trying to improve resources for teachers of LDWRs working in K-12 classrooms.

During the second focus group session, participants discussed the finding from the literature review that extensive reading on topics of personal interest at or just above students' proficiency levels may promote increased reading fluency and comprehension in LDWRs (Brustad, 2006; Hitosugi & Day,

2004; Suk, 2017). Participants believed this recommendation to be impractical in their K-12 classrooms, echoing other research that has found that despite the wealth of authentic target language material online, it is difficult to find grade- or level-appropriate materials for students (Zimmerman & McMeekin, 2020). Participants discussed the challenge of finding material that was both authentic and level-appropriate:

> Participant 2 (middle school Mandarin): It's so hard to find resources that are suitable for our students. At our school, we develop our own curriculum so the topics covered may not be covered by the big companies that provide the reading resources. So it may be difficult to find those resources unless we create them ourselves, and if we create them ourselves it's not authentic.
>
> Participant 3 (grades 8-12 Arabic): Yeah, it's hard to find authentic materials that are appropriate for Novice levels.

Participants in the second focus group explained that another major challenge was finding material that was age-appropriate for students. Participants described using authentic material made for children, such as children's books and YouTube videos, but Participant 2, a middle-school Mandarin teacher, said that "if they match the [students'

proficiency] level, they don't have any plots." Participant 3, a grade 8-12 Arabic teacher, added that students "would rather talk about something much more complex." Additionally, participants described the challenges involved in trying to make complex texts accessible. Participant 3 wondered whether "alter[ing] the task not the text" was affecting students' reading skills and noted that she often did not expect students to read a full paragraph. According to Participant 2, even though some students enjoy reading things that are more challenging, "some students give up when they see books beyond their level." While many of these challenges may be shared by other LCTL teachers, some aspects are specific to LDWRs. Participant 3 described particular challenges in using authentic Arabic children's materials because "literacy is a big debate in the Arab world. Children's books there are very formal, written with vowelized text. The idea there is to teach children 'good' Arabic instead of dialect, whereas I teach more dialect." Thus, in selecting materials, teachers of LDWRs must be sensitive not only to concerns of availability, authenticity, and age- and level-appropriateness, but also print norms.

During the second focus group, the participants additionally noted that research on teaching reading may not be easily available to teachers of some LDWRs or may not readily translate into practice. Since teachers of LDWRs must

teach students literacy in a new writing system, a lack of accessible and actionable research and specific training is more acute for them than for teachers of other world languages. Participant 1, an elementary school Russian teacher, stated, "There is so much information out there, but it's individual teachers, it's at the lay level, not published," and emphasized the "disconnect between the people publishing and classroom teachers." The participants elaborated:

> Participant 3 (grades 8-12 Arabic): I think that in our field teachers don't have enough training about how to teach reading. Teachers who learn how to teach reading in any language have a lot of training in how to teach decoding skills for example, and that's not necessarily a standard part of our teaching training.
>
> Participant 1 (elementary school Russian): It's not that there's not enough training, there is no training.

Group Identity and Professional Networks

Throughout the focus group discussions, participants connected based on shared challenges and a sense that they do something different from their non- LDWR colleagues, indicating a shared professional identity in spite of different backgrounds and languages of instruction. This is confirmed

by the participants' reaction to the term "Languages with Diverse Written Representations." During the first focus group and in early planning for resources to supplement the Massachusetts World Languages Curriculum Framework, this set of languages was referred to as "non-alphabetic languages." Participant 1, an elementary school Russian teacher, questioned this grouping, saying, "The Cyrillic alphabet is different from Latin, but not as different as other writing systems. Are we artificially grouping these languages?" After this focus group, the researchers decided with the Massachusetts Department of Elementary and Secondary Education to use the term "Languages with Diverse Written Representations," as described in the methodology section of this paper. During the second round of focus groups, participants agreed that the term LDWR was more representative and accurate for the group:

> Participant 1 (elementary school Russian): I like LDWR. I'm not offended [by the term non-alphabetic languages], but yes, my language is alphabetic.
>
> Participant 3 (grades 8-12 Arabic): I like it also. The term I've heard most is LCTL, but that doesn't capture what you're referring to.

As the participants noted, other terms for this group of languages do not capture the same distinction. Not all less commonly taught languages are non-alphabetic; some, like Portuguese, use the Roman alphabet while others, such as Russian, use non-Roman alphabets. The term "Less Commonly Taught Languages" also does not fully identify this group. Some challenges for LDWR teachers are common to other LCTLs, such as difficulty obtaining appropriate authentic materials. However, other challenges are related specifically to teaching LDWRs, including teaching students to read and write with new writing systems. Some participants also noted the lack of linguistic similarities such as cognates between their languages and English. In addition, while LDWRs are currently among the languages less commonly taught in the United States, their enrollment is growing, and enrollment in Chinese classes is poised to outpace enrollment in German classes (American Councils for International Education, 2017), even though German is currently considered a commonly taught language (National Council of Less Commonly Taught Languages, n.d.). Thus, at some point, Chinese may become a commonly taught language, but Chinese instructors will still share certain instructional challenges with other teachers of LDWRs.

Participants' discussion of how teachers of LDWRs fit into their schools confirmed that they view themselves in some ways as apart from their colleagues:

> Participant 4 (Farsi speaker and grade 7-12 curriculum supervisor): I think some of the language in the [Massachusetts World Languages Curriculum Framework] document would allow some cohesiveness within a department. Some of the ambiguity could be resolved by working with our colleagues/department heads. I want us not to forget that we're still part of a whole while being quite special in what we do.
>
> Participant 1 (elementary school Russian): Isn't the goal to be all-inclusive? I had an experience where the school had one set of goals for other languages and one for Russian because it was "so difficult." I agree that standards can and should be the same for all languages, but we may need different approaches.

While participants were aware of existing opportunities to connect with other educators, such as conferences, they reported a lack of time and availability for participating in these large-scale events or activities. As Participant 1, an elementary school Russian teacher, stated, "How often do you go to

conferences? Never, because you don't have time." In a discussion of teaching strategies, Participant 3, who teaches grade 8-12 Arabic, stated it would be "good for teachers to discuss with others who teach their language", and participants agreed that there is a need for greater collaboration and cross-language connections among teachers of LDWRs. Participants suggested working groups as a way to create shareable online resources that would take less time than attending conferences. To surmount their challenges in finding appropriate materials and teaching strategies, participants suggested that professional networks had the potential to make information more accessible and available to teachers, echoing other research which has found that teacher professional networks reduce teacher isolation and provide pedagogical benefits (Knight, 2020; Macià & Garcia, 2016; Moloney & Xu, 2018).

As the focus group participants noted, the term LDWR more accurately captures the distinguishing aspects of these languages for instructors in U.S. K-12 settings. As discussed in the Background section, there is demand among LDWR teachers for content-focused professional development, and teachers are more likely to attend such professional development (Bigsby & Firestone, 2017; Darling-Hammond et al., 2017). Additional research suggests that professional identity plays a role in teachers' decisions to participate in

professional networks (van den Beemt et al., 2018), so we anticipate that promoting a sense of group identity among LDWR teachers may encourage these educators to increase their participation in professional networks and professional development. Thus, instructors of LDWRs may be seen as a coherent group with a distinct identity based on common needs, and educators in this group can benefit from additional opportunities for connections and collaboration as well as support to apply world language standards to their teaching practices.

Conclusion

As shown in the focus groups conducted for this study, K-12 educators of LDWRs have many things in common despite teaching different languages. In particular, they face challenges related to implementation of broad world language standards and limited instructional resources and research that can be applied to practice, especially as related to the teaching of new writing systems, and may feel isolated in their schools or districts. This study shows that previously-identified challenges for different LDWRs are common across languages and identifies the potential for shared solutions among LDWR educators. States, world language programs, and individual teachers may benefit from considering teachers of LDWRs as

a group in order to support educators in facing these challenges by building professional networks that can share resources and support the implementation of best practices in the classroom. This grouping supports the development of literacy skills for students and resources for teachers who often need to determine how to develop these skills with limited formal curricular resources or specific training. At the K-12 level, states and districts may consider looking at LDWRs as a group in order to efficiently provide these resources and encourage the exchange of ideas and materials between teachers who may not have colleagues of similar languages in their schools or districts. More broadly, professional organizations of language teachers, teacher preparation programs, and other policy-makers and stakeholders in U.S. K-12 language education could examine how they center or privilege Roman alphabet languages in their resources and recommendations; reflect on how such assumptions burden teachers and students of LDWRs; and consider ways to become more inclusive of these languages.

As states like Massachusetts develop and disseminate updated world language standards, they should consider what guidance teachers may need to implement those standards in the classroom and in their specific contexts. Teachers of some languages may need more resources to effectively implement

standards even if the state does not develop language-specific standards. Practical, short-form guidance, such as the Quick Reference Guides developed as part of this research (Center for Applied Linguistics, 2021) may be more accessible to teachers and seen as more manageable than available academic research. In addition, professional development opportunities can help teachers learn to use the standards, teach literacy skills in a new writing system, and develop appropriate instructional materials. States can also support LDWR teachers by creating spaces for collaboration through official networking and other channels.

During this study, participants called for research into the different rates of development of different linguistic skills, especially an expected and observed slower pace of acquiring proficiency in reading and writing compared to listening and speaking for learners of LDWRs. Teachers of these languages would benefit from additional research on K-12 classroom-based best practices for teaching literacy in new scripts for speakers of English and other languages that use the Roman alphabet; presenting cultural information in the target language for Novice learners; and locating, adapting, and sharing authentic texts that are both level- and age-appropriate. Educator input would enhance the development of world language content standards, supplemental resources, and

support for implementation. Whether research and resources are developed at the lay level or by academics, the field as a whole can benefit from efforts to connect teachers to each other and make materials and best practices more widely accessible.

Acknowledgements

We thank the Massachusetts Department of Elementary and Secondary Education, which funded the initial research that led to this paper, and the educators who attended the focus groups and participated in the research.

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