Multicultural Education

Volume 11, Issue 11, 2025

Teachers of Culturally and Linguistically Diverse Students and Effective Professional Development: A Critical Review of Research

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Article Info

Article History

Received:
August 01,2025

Accepted:
November 03,2025

Keywords :
Professional Development, Culturally And Linguistically Diverse Education, Online Professional Development, English Language Teaching

DOI:
10.5281/zenodo.17515016

Abstract

Effective Professional Development (PD) is essential for teachers of Culturally and Linguistically Diverse (CLD) students. Despite the continuing increase of diversity of students, teachers are underinformed with best practicesfor teaching and support. This review of the literature covers two distinct but related topics: why teachers of CLD student need more PD and what factors need to be present for PD to be effective. First, I explain why teachers need PD. Research shows that most teachers who work with CLD students are insufficiently trained for how to support these students. This lack of teacher education can fail these students and potentially lead to an inappropriate identification for special education.Second, I explain what makes PD effective. Researchers agree that for PD to have an impact on student achievement it needs to be content focused, coherent, collaborative, active learning and for a sustained duration. Additionally, PD sessions that are held online have been found to be just as effective as face-to-face workshops when there is a focus on participant connections to each other and to the instructor.

Introduction

Student populations continue to become increasingly linguistically and culturally diverse (Mitchel, 2020; National Center for Education Statistics, 2021; National Center for Education Statistics, 2021a; National Center for Education Statistics, 2020a).In the United States, for example,in 2018 CLD students comprised 10.2% of the population, this was an increase from 9.2% in 2010 and 8.1% in 2000. This means that the number of students increased from around 3.5 million CLD students in 2000 to 5 million in 2018 (National Center for Education Statistics, 2021a;National Center for Education Statistics, Common Core of Data (CCD), 2020a). In order to provide quality education to this population, it is critical that teachers are provided the training and professional development; such professional development needs to be effective to impact students. Researchers agree that an effective professional development program has five elements: content focus, active learning, coherence, duration, and collective participation (Desimone, 2009; Fischer et al., 2019; Russell et al., 2009; Moon et al., 2014; Darling-Hammond et al., 2017; Wayne et al., 2008). Some research has shown that when these factors are present, professional development can be just as effective when presented in non-traditional formats such as online sessions or through asynchronous platforms (Dede et al., 2009; Yoon et al., 2020; Russell et al., 2009; Surrette& Johnson, 2015). Online professional development can bring opportunities teachers who would normally be limited to attending professional developments in their local areasdue to time and/or the cost of travelling, and more recently because of necessary social distancing measures (Bowen et al., 2014; Dede et al., 2009).

This literature review examines the need for professional development and pre-service training for teachers of CLD students, and what platforms and factors are needed for effective professional development. First, there is a brief summary of literature that explains why professional development is needed for teachers to support CLD students and reduce the number of over and under identification of CLD students in special education programs. Next, professional development is examined in two parts: research-supported recommendations for effective professional development, and a justification for both synchronous and asynchronous online professional development as an effective mode of providing professional development for teachers.

Why Teachers of Culturally and Linguistically Diverse Students Need Professional Development

Teachers are underprepared

When teachers complete effective PD courses, students benefit (Yoon, Miller & Richman, 2020; Awada& Gutierrez-Colon, 2017; Fischer et al., 2018; Garet et al., 2001; Darling-Hammond et al., 2017).

> The teacher's role in creating inclusive learning environments is essential, for the inclusive environments tremendously depend on having th teacher's knowledge, dispositions, cooperation, potentials, and attitudes. Research showed that teachers' perceptions of inclusion and awareness of the obstacles in establishing the inclusive learning environments are critical (Awada& Gutierrez-Colon, 2017, p. 50)

Despite this growing and substantial population of students,research shows that many teachers are not knowledgeable about best practices of teaching CLD students (Brown & Doolittle, 2008; Ferlis& Xu, 2016). In 2018, the National Center for Education Statistics reported that only 44% of surveyed teachers in the United States who had at least one CLD student in their classroom received professional development specifically for working with these students.This trend has not improved: in 2021, the National Center for Education Statistics reported that on average, 41% of teachers have taken one or more courses regarding teaching CLD students and teachers who have been teaching longer are less prepared to teach CLD students: "60% of the newest teachers had taken courses on teaching students who are LEP or ELLs compared to 14% of teachers who had been teaching the longest" (National Center for Educational Statistics at IES, 2021).Teachersarecentralto education process therefore need preparation programs and professional development that provide information about instruction, culture and language when instructing diverse students. Teachers of CLD students need to know evidence-based instruction that is "specifically designed for teaching ELLs" (Xu & Drame, 2007, p. 310). Both elementary classroom teachers and secondary content teachers need to understand that teaching CLD students is more than "just good teaching" (Harper & de Jong, 2004; He, Prater & Steed, 2011).When CLD students are put in mainstream classrooms, they need teachers who are trained specifically for working with diverse learners (De Jong & Harper, 2013; Fernandez &Inserra, 2013). "There is a need for mainstream teachers to be trained on all aspects of acculturation along with understanding the difference between acculturation versus assimilation" (Fernandez &Inserra, 2013, p. 12). Considering this lack of teacher preparedness, training for working with CLD students is essential (National Center for Education Statistics, 2020).

Overwhelmingly, it has been found that effective teacher preparation in college and ongoing professional developmentareamong the most beneficial practices for supporting CLD students (Gay, 2002; Garet et al., 2001; Aristizabal, Jorge & Alexandar, 2018; Awada & Gutierrez-Colon Plana, 2017; Brown & Doolittle, 2008; Fernandez & Inserra, 2013; Kamps, et. al. 2007; Nguyen, 2012; Oh, Murawski, & Nussli, 2017; Orosco & O'connor, 2014; Sullivan, 2011; Wang & Wolf, 2015; Zetlin et. al., 2011). Through PD teachers can gain a deeper understanding and incorporate new strategies into instruction (Jacobs, Assaf & Lee, 2011). According to Fischer et al. (2018): "…findings indicate that teachers' PD participation can directly influence the enactment of instructional practices in the classroom" (p. 114). While the details of university preparation programs are beyond the scope of this literature review, universities that have programs that prepare teachers to work with CLD students are a "vital component of the pathway that will lead to optimal ELL outcomes" (Zetlin et al., 2011, p. 69). When teachers are provided education for working with a variety of cultures, linguistic backgrounds and learning styles, whether through university course work or through professional development of districts, they are more aware of how to support students effectively. Unfortunately, most schools are insufficient in providing this type of professional development and there is an urgent need to examine professional practices that impact CLD students (Nguyen, 2012; Oh, Murawaki & Nussli, 2017; Fernandez &Inserra, 2013).

Teachers with knowledge, skills and expertise on differentiation, English language acquisition, acculturation and assimilation are better equipped to support diverse learners and avoid mistaking language acquisition for a learning disability (Aristizabal, 2018; Awada & Gutierrez-Colon Plana, 2018; Awada & Gutierrez-Colon Plana, 2017; Fernandez & Inserra, 2013; Nguyen, 2012). "[A]ll educators must be knowledgeable in first and second language acquisition principles and culturally responsive pedagogy as well as have access to specialists who are well-trained in in differentiating cultural and linguistic differences from disabilities" (Kamps, et. al., 2008, p. 66). More generally,"to be successful with ELLs, however, teachers need to draw on established principles of second language learning….a teacher who has ELLs in his or her class is best equipped to teach them if he or she has knowledge of some key principles of second language learning" (Lucas, Villegas &Freedson-Gonzalez, 2008, p. 362). These recommendations should be applied to both elementary teachers, who are the primary contact for students throughout the day and secondary teachers, who need to recognize the language demands of their content area which can often go unnoticed by mainstream teachers.Additionally, "most teachers (and particularly secondary-level math, science, or social studies teachers) are not accustomed to thinking of themselves as language teachers" (Harper & de Jong, 2004, p. 156). After a three-year study to improve educator expertise to support student language development through teacher professional development, Heineke et al. (2019) found that because of professional development, teachers were more likely to integrate cultural and linguistic backgrounds of students into lessons and were more aware of linguistic biases in curricula. They also noted that teachers started integrating best practices in their teaching such as funds of knowledge interviews and "attending to academic language in classroom instruction" (p. 69).

Improving practice through improving Teacher self-efficacy

Self-efficacy is a future-oriented belief about the level of competence a person expects that one is capable ofandhas been shown to have a direct impact on student achievement(Bandura, 1997; Tschannen-Moran & McMaster, 2009; Paneque, & Barbetta, 2006; Yuan & Kim, 2014; Zee &Koomen, 2016; Durgunoglu, & Hughes, 2010). Professional development can help teachers increase self-efficacywhich can improve student achievement (Zee &Kooman, 2016; Darling-Hammond et al., 2017). "Collaborative and job-embedded PD can be a source of efficacy and confidence for teachers and can result in widespread improvement within and beyond the school level" (Darling-Hammond et al., 2017, p. vi). Research has shown that teachers who are highly efficacious are more likely to engage in continued learning, try to improve practice by trying new things, be more inclusive (Melinen et al., 2013; Yuan & Kim, 2014), have better classroom management skills (Melinen et al., 2013; Zee &Koomen, 2016), have better relationships with parents (Paneque&Barbetta, 2006).

Reducing misidentification in special education programs

Under-representation in Special Education. Culturally and Linguistically Diverse (CLD) students are both under and overrepresented in special education, but in general, CLD students are more likely to be underrepresented in grades 2 and under (Samson & Lesaux, 2009; Wagner et al., 2005; Morgan & Farkas, 2016). A learning disability might go undetected because teachers may perceive reading struggles simply as English language development. It is important to identify the difference because reading problems become much harder to overcome over time (Chu & Flores, 2011; Morgan & Farkas, 2016; Juel, 1988; Samson & Lesaux, 2009; Swanson et al., 2020; Wagner et al., 2005).When a student with a learning disability is not identified until upper elementary school, it becomes progressively more difficult to close the gap in both background and conceptual knowledge due to text being less accessible for these students than those without reading difficulties or those who are native English speakers (Samson & Lesaux, 2009).

Over-representation in Special Education. It has also been found that starting around grade 3, CLD students are overidentified for special education. Often language learning can have similar characteristics to a learning disability (Artiles & Ortiz, 2002; Chu & Flores, 2011; Samson & Lesaux, 2009; Sullivan, 2011) and it is not easy to determine if an CLD student has a language deficit or a learning disability (Fernandez & Inserra, 2013). According to Swanson et. al. (2020) "these confounds are due in part to attributing difficulties in second-language acquisition and reading or math achievement to the same cognitive processes as found in children with learning disabilities" (p. 293). This is complicated primarily because the support students receive in special education is not necessarily the type of support CLD students need: "ELLs… need culturally and linguistically appropriate instruction no matter the educational setting" (Brown & Doolittle, 2008, p. 66). Special education should not be used as an alternative option for a lack of English language instruction and can be "detrimental" to CLD students (Sullivan, 2011, p. 33).

Assessment. TheResponse to Intervention modelhas been beneficial for struggling students (Haager, 2007; Awada&Gutierresz-Colon; Ferrer et al., 2010) but teachers need training regarding decision makingfor appropriate placement (Brown & Doolittle, 2008). Many of the interventions have not been normed or tested on a linguistically diverse population, whichcan perpetuate the potential that Culturally and Linguistically Diverse students will not respond to these methods therefore resulting in inaccurate support or placement in special education (Vaughn et al., 2005). Because interventions, progress monitoring measures, and other assessments are typically given in English despite some studentswho are still developing their English language proficiency, it is vital to train teachers to recognize how to interpret results and recognize when results may not be valid.

Research Supported Recommendations for Effective Professional Development

Professional Development (PD) is the continuing education for teachers which can take a variety of forms: workshops, in school training, informal discussions, conferences, social media, courses, observation, mentoring, reflecting on actual lessons, curriculum development and so on (Desimone, 2009; Parsons et al., 2019). Traditionally, PD has been offered either in schools or local school districts in face-to-face meetings and workshops (Dana et al., 2013; Surrette& Johnson, 2015). In recent years with increasing access to the internet and especially with the necessary distancing measures due to the COVID19 global pandemic, more PD opportunities have become available online (Hartshorne et al., 2020).

Researchers are clear about what constitutes "effective" professional development (Garet et al., 2001; Desimone, 2009; Russell et al., 2009; Moon et al., 2014; Darling-Hammond et al., 2017; He, Prater & Steed, 2011; Wayne et al., 2008; Lawless &Pellengrino, 2007). At its core, high quality PD has the following five components: (a) content focused, (b)incorporates active learning, (c)supports collaboration and collective participation, (d) coherent, (e) sustained duration(Garet et al., 2001; Desimone, 2009; Darling-Hammond et al., 2017). For outcomes of PD to have a positive effect on students, it has to be meaningful and more than a one-day workshop in a subject area that teachers are not interested in (Darling-Hammond et al., 2017):teachers are more invested in PD programs when they know that the purpose of what is being taught aligns with their teaching role (Surette & Johnson, 2015; Dana et al, 2013; Moon et al., 2014). When these essential elements are

present in PD courses, teachers are more invested, have more opportunities to engage in sustained practice of concepts they are learning about, there is a greater positive impact on student achievement (Garet et al., 2001; Darling-Hammond et al, 2017; Yoon et al., 2008).

In addition to the five essential components, there are actions and structures that can improve delivery of PD. Facilitators should make sure that participants can use what they are learning in ways that are practical can be embedded in day-to-day teaching fitting with the needs of their students (Darling-Hammond et al., 2017; Russell et al., 2009; Garet et al., 2001; Moon et al., 2014). Further, there should be an opportunity for guidance for participants: collective knowledge and collaboration should be encouraged, and facilitators should provide modeling and coaching when available (Garet et al., 2001; Russell et al., 2009). Finally, PD should have an expectation of teacher reflection and provide time and structure for it (Powell &Bodur, 2019; Desimone, 2009). It should be noted that for teachers of CLD students, culturally relevant practices must be considered in addition to the content being covered (Heineke et al., 2019; Jacobs et al., 2011; Ferlis& Xu, 2016). "Within professional development, there needs to be a balance between focusing on strategies and reflecting on beliefs and assumptions about culturally and linguistically diverse students" (Jacobs, Assaf & Lee, 2011, p. 510).

Effective and efficient:Online Professional Development

Benefits of Online Professional Development

Traditionally, PD has been offered in face-to-face meetings or workshops, but with the increasing availability and quality of internet access, online PD (OPD) has become a desirable, and at times necessary, option for many people (Parsons et al., 2019).Even outside of the required social distancing precautions of the COVID19 pandemic, having PD options online eliminates barriers such as cost and time of traveling to another location; increases options of topics and available experts and allows teachers to engage when it fits into their busy schedule (Dede et al, 2009; Russell et al., 2009; Yoon et al., 2020; Powell &Bodur, 2019; Parsons et al., 2019).

Online professional development has been found to be just as effective as face-to-face PD (Moon et al., 2014; Surrette& Johnson, 2015) and can take a variety of forms: "Online PD can be synchronous, where learning happens in real time, asynchronous, where teachers engage in their learning on their own time, or a hybrid of both synchronous and asynchronous" (Parsons et al., 2019, p. 34). OPD can offer participants benefits beyond in-person meetings by weaving elements of best practices of PD for a sustained duration, rather than a one-off meeting or workshop (Darling-Hammond et al., 2017), and can provide access to experts and topics all over the world, insteadof limiting teachers to what is offered locally (Uzuner Smith, 2014; Russell et al., 2009; Dede et al., 2009). OPD alsoallows for ongoing work-embedded practice of new skills and knowledge (Dede et al., 2009; Russell et al., 2009; Parsons et al., 2019) and increased agency by allowing participants to set their own pace and access materials during flexible hours (Parsons et al., 2019; Dede et al., 2009; Yoon et al., 2020; Uzuner Smith, 2014).

Recommendation for Effective Online Professional Development

Online professional development should have the fundamental elements that are essential for face-to-face PD as previously covered: content focused, active learning, collaborative, coherent and for a sustained duration (Garet et al., 2001; Desimone, 2009; Darling-Hammond et al., 2017), however both synchronous and asynchronous OPDhave additional necessary components for participants to be successful, that is to improve their teaching practice and increase student achievement. It is important that participants feel a sense of connection and engagement which are specifically outlined in D. Randy Garrison's (2002) Community of Inquiry framework, explored in the next section. It is also important that facilitators provide clear structure, guidance and sufficient time for reflection (Russell et al., 2009; Powell &Bodur, 2019).

Just as with face-to-face PD workshops and classes, OPD needs facilitators to consider the engagement of the participants. Instructors should help guide thoughtful dialog, pose engaging questions, and provide explicit structure (Powell &Bodur, 2019; Russell et al., 2009). Additionally, creating a sense of community, collective identitiy and a climate for open communication and trust are essential for promotinglearning in online settings (Booth, 2012; Garrison &Arbaugh, 2007).

Community of Inquiry and Online Professional Development. In 2002, D. Randy Garrison proposed the "Community of Inquiry" (COI)approach to online learning."The COI framework is a process model of learning in online and blended environments where the social construction of knowledge is made nontrivial by the separation of course participants in time and space"(Swan, 2019, p. 58). In other words, a course designed using the COI framework integratesteacher presence, student presence and peer-to-peer connections and trust (Garrison & Cleveland-Innes, 2005). Since the creation of COI, researchers have established that including this framework in creating online courses is beneficial to learners (Kebritchi, Lipschuetz, & Santiague, 2017; Castellanos-Reyes, 2020; Kumi–Yeboah, Dogbey, & Yuan, 2018).

Teacher presence. In the COI framework, teaching presence is considered the instructor's "ability to design and direct cognitive and social processes within the online educational experience" (Dana et al., 2013, p. 256) and it is comprised of three parts: designing, facilitating, and instructing the course (Fiock, 2020). These

factors are neededfor creating and sustaining the connections between participants in the class (Kebritchi, Lipschuetz&Santiague, 2017; Garrison & Cleveland-Innes, 2005) and participant to facilitator connections which have been shown to increase participant satisfaction (Jaggars & Xu, 2016).

Cognitive (student/participant) presence. Participants need to be meaningfully engaged with the PD in order to benefit from it, however, what this looks like is not always consistent (Garrison & Cleveland-Innes, 2005):

> Meaningful engagement does not simply correspond to sending lots of messages. It may mean that a student is engaged vicariously by following the discussion, reflecting on the discourse, and actively constructing meaning individually. Ideally, interaction would be required to confirm understanding. However, students may be cognitively present while not interacting or engaged overtly. This reveals another challenge in understanding the qualitative nature of interaction in an online context (Garrison & Cleveland-Innes, 2005, p. 144)

Instructors are influential guides in creating cognitive presence (Booth, 2012), but researchers have found that peer-to-peerconnection also can lead to student presence: "Increased sociability of course participants lead to increased interaction, therefore implying that social presence is necessary for the development of cognitive presence" (Garrison & Arbaugh, 2007, p. 160).

Peer-to-peer Connection and Trust. In the OPD setting, creating trust and a sense of community are important for participant learning (Garrison & Cleveland-Innes, 2005; Garrison &Arbaugh, 2007; Xu & Jaggars, 2013; Yoon et al., 2020; Calderon &Sood, 2020; Kebritchi, Lipschuetz&Santiague, 2017). This engagement can be in the form of discussions, positive feedback and encouragement, constructive criticism and/or engaging peers in conversations (Calderon &Sood, 2020). Yoon et al. (2020) found that participantsconsidered peer relationships to be of particular importance to increasing their confidence in engaging in OPD. These participants especially depend on the facilitator and structure of the PD courses to establish communication and trust because they are not necessarily otherwise interacting with their peers, especially if the OPD has participants from a variety of schools and locations (Kumi–Yeboah, Dogbey, & Yuan, 2018).

> Substantial evidence exists to support the importance of social presence, student interaction and teacher presences in online learning environments. Settings in which students and teacher establish social presence, in which teachers interact with students and support them in a variety of ways, and in which student participation is high, are likely sites for student learning and student satisfaction" (Wallace, 2003, p. 217)

Asynchronous Versus Synchronous for Professional Development

There are three formats for offering OPD: Asynchronous, synchronous, and blended. Asynchronous occurs when participants engage at times when they choose, synchronous learning is when participants engage together at the same time and blended uses a combination of the two (Parsons et al., 2019). Some researchers have concluded that there are benefits and limitations to both platforms but there is no statistically significant difference in learning outcomes between synchronous and asynchronous PD (Bowen et al., 2014; Figlio, Rush & Yin, 2013; Fishman et al., 2013).

Benefits and limitations of asynchronous professional development

Asynchronous OPD is primarily beneficial for the flexibility it offers teachers and the time it allows for deep thinking and reflection (Dede et al., 2009; Russell et al., 2009; Torun, 2013; Hrastinski, 2008): "because online programs can store written records of teacher conversations, and because teachers can participate in group discussion asynchronously, OPD allows teachers to contribute ideas when they are ready and to be more reflective in their written comments" (Russell et al., 2009, p. 445). Furthermore, when instruction and discussion happen asynchronously, a library of materials is built and participants can view the videos and dialoged responses multiple times (Fishman et al., 2013; Dede et al., 2009; Russell et al., 2009; Torun, 2013).

While some studies found that there were limitations to asynchronous learning, none of them had findings that were statistically significant (Fishman et al., 2013). The primary limitation to asynchronous learning was the absence of a sense of community (Figlio, Rush, & Yin, 2013; Hrastinski, 2008; Garrison &Arbaugh, 2007) and though there were no statistical differences in measured outcomes, participants reported missing the collegiality that can accompany synchronous discussions (Fishman et al., 2013; Hrastinski, 2008; Garrison &Arbaugh, 2007). This can be remedied through careful planning and facilitation by the instructor (Fiock, 2020).

In the end, due to the minimal differences in outcomes, it can be argued that asynchronous PD is a more beneficial platform than synchronous learning. Fishman et al. (2013), explain:

> You only have to spend as much time as you need. There is no "break time" built into online PD; one moves as fast as one wants to. Because we found no relationship between amount of time teachers spend on online PD and our outcome measure, we conclude that teachers who completed online PD more rapidly required less time to benefit from materials (p. 435).

Conclusion

As student populations become more diverse, the need for CLD teacher training is necessary for all teachers (Mitchel, 2020; Brown & Doolittle, 2008; Ferlis& Xu, 2016; De Jong & Harper, 2005; Xu & Drame, 2007; National Center for Education Statistics, 2021; National Center for Education Statistics, 2021a; National Center for Education Statistics, 2020a). Teachers of CLD students need training for best practices targeted to the specific needs of cultural and linguistic diversity in order to support their specific needs (Nguyen, 2012; Oh, Murawaki & Nussli, 2017; Fernandez &Inserra, 2013) and avoid misidentification in special education (Fernandez & Inserra 2013; Morgan & Farkas, 2016;Swanson et al., 2020). Research has established what makes effective PD and recently this has expanded to best practices for online PD as well (Desimone, 2009; Fischer et al., 2019; Russell et al., 2009; Moon et al., 2014; Darling-Hammond et al., 2017; Wayne et al., 2008; Yoon et al., 2020; Surrette& Johnson, 2015). Elements such as student engagement, connections between teachers and students as well as trust among participants should be included in design and implementation of OPD (Russell et al., 2009; Powell &Bodur, 2019; Booth, 2012; Garrison &Arbaugh, 2007; Garrison, 2002). Extending PD opportunities to virtual platforms allows for those teachers who continue to practice social distancing measures due to COVID19, and those who are limited due to time and cost of travel even when travel itself is unrestricted (Dede et al, 2009; Russell et al., 2009; Yoon et al., 2020; Powell &Bodur, 2019; Parsons et al., 2019). Of the options for OPD, researchers have concluded that asynchronous and synchronous options have similar learning outcomes (Bowen et al., 2014; Figlio, Rush & Yin, 2013; Fishman et al., 2013), and that because of the flexibility and participant agency, asynchronous is likely a more desirable option for many.

References

Awada, G. M., & Gutiérrez-Colón, M. (2017). Effect of inclusion versus segregation on reading comprehension of EFL learners with dyslexia: Case of Lebanon. *English Language Teaching, 10*(9), 49-60. https://doi.org/10.12973/iji.2018.11332a

Bandura, A. (1997). *Self-efficacy: the exercise of control*. W. H. Freeman & Co. https://doi.org/10.5860/choice.35-1826

Booth, S. (2012). Cultivating knowledge sharing and trust in online communities for educators. *Journal of Educational Computing Research, 47*(1), 1-31.http://dx.doi.org/10.2190/EC.47.1.a

Bowen, W. G., Chingos, M. M., Lack, K. A., & Nygren, T. I. (2014). Interactive learning online at public universities: Evidence from a six-campus randomized trial. *Journal of Policy Analysis and Management*, *33*(1), 94-111. https://doi.org/10.1002/pam.21728

Brown, J. E., & Doolittle, J. (2008). A cultural, linguistic, and ecological framework for Response to Intervention with English language learners. *Teaching Exceptional Children*, *40*(5), 66–72. https://doi.org/10.1177/004005990804000509

Calderon, O., &Sood, C. (2020). Evaluating learning outcomes of an asynchronous online discussion assignment: a post-priori content analysis. *Interactive Learning Environments*, *28*(1), 3-17.https://doi.org/10.1080/10494820.2018.1510421

Castellanos-Reyes, D. (2020). 20 years of the Community of Inquiry framework. *TechTrends: Linking Research & Practice to Improve Learning*, *64*(4).https://doi.org/10.1007/s11528-020-00491-7

Chu, S.-Y., & Flores, S. (2011). Assessment of English language learners with learning disabilities. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, *84*(6), 244–248. https://doi.org/10.1080/00098655.2011.590550

Dana, N. F., Dawson, K., Wolkenhauer, R., & Krell, D. (2013). Pushing the envelope on what is known about professional development: The virtual school experience. *Professional Development in Education*, *39*(2), 240–259. https://doi.org/10.1080/19415257.2012.762417

Darling-Hammond, L., Hyler, M., Gardner, M., & Espinoza, D. (2017). Effective teacher professional development. Palo Alto, CA: Learning Policy Institute.

Dede, C., JassKetelhut, D., Whitehouse, P., Breit, L., McCloskey, E. (2009). A research agenda for online teacher professional development. *Journal of Teacher Education, 60*(8), 8-19. https://doi.org/10.1177/0022487108327554

Desimone, L. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher, 38*(3), 181-199. https://doi.org/19.3192/0013189X08331140

Durgunoglu, A. Y., & Hughes, T. (2010). How prepared are the US preservice teachers to teach English language learners?.*International Journal of Teaching and Learning in Higher Education, 22*(1), 32-41.

Ferlis, E., & Xu, Y. (2016). Prereferral process with Latino English language learners with specific learning disabilities: Perceptions of English-as-a-second-language teachers. *International Journal of Multicultural Education, 18*(3), 22-39. https://doi.org/10.18251/ijme.v18i3.1113

Fernandez, N., &Inserra, A. (2013). Disproportionate classification of ESL students in US special education. *Teaching English as a Second or Foreign Language-Electronic Journal, 17*(2), n2.

Ferrer, E., Shaywitz, B. A., Holahan, J. M., Marchione, K., &Shaywitz, S. E. (2010). Uncoupling of reading and IQ over time: Empirical evidence for a definition of dyslexia. *Psychological science*, *21*(1), 93-101. https://doi.org/10.1177/0956797609354084

Fiock, H. (2020). Designing a community of inquiry in online courses. *The International Review of Research in Open and Distributed Learning*, *21*(1), 135-153. https://doi.org/10.19173/irrodl.v20i5.3985

Fischer, C., Fishman, B., Dede, C., Eisenkraft, A., Frumin, K., Foster, B., Lawrenz, F., Jurist Levy, A., McCoy, A. (2018). Investigating relationships between school context, teacher professional development, teaching practices, and student achievement in response to a nationwide science reform. *Teaching and Teacher Education, 72*, 107-121. https://doi.org/10.1016/j.tate.2018.01.011

Fishman, B., Konstantopoulos, S., Kubitskey, B.W., Vath, R., Park, G., Johnson, H., & Edelson, D. (2013). Comparing the impact of online and face-to-face professional development in the context of curriculum implementation. *Journal of Teacher Education, 6*(5), 426-438. http://dx.doi.org/10.1177/0022487113494413

Garet, M., Porter, A., Desimone, L., Birman, B., Yoon, K. (2001). What makes professional development effective? Results from a. national sample of teachers. *American Educational Research Journal*, *38*(4), 915-945. https://doi.org/10.3102/00028312038004915

Garrison, D. R., &Arbaugh, J. B. (2007). Researching the community of inquiry framework: Review, issues, and future directions. *The Internet and Higher Education*, *10*(3), 157-172.

Garrison, D. R. & Cleveland-Innes, M. (2005). Facilitating cognitive presence in online learning: Interaction is not enough. *The American Journal of Distance Education, 19*(3), 133-148. https://doi.org/10.1207/s15389286ajde1903_2

Gay, G. (2002). Preparing for culturally responsive teaching. *Journal of Teacher Education, 53*(2), 106-116. https://doi.org/10.1177/0022487102053002003

Harper, C. & de Jong, E. (2004). Misconceptions about teaching English-language learners. *Journal of Adolescent & Adult Literacy, 48*(2), 152-162. 10.1598/JAAL.48.2.6

Hartshorne, R., Baumgartner, E., Kaplan-Rakowski, R., Mouza, C., Ferdig, R. (2020). Special issue editorial: Preservice and inservice professional development during the COVID-19 pandemic. *Journal of Technology and Teacher Education, 28*(2), 137-147. https://www.learntechlib.org/p/216910/

He, Y., Prater, K. & Steed, T. (2011). Moving beyond 'just good teaching': ESL professional development for all teachers. *Professional Development in Education, (37)*1, 7-18. https://doi.org/10.1080/19415250903467199

Heineke, A. J., Papola-Ellis, A., Davin, K. J., Cohen, S., Roudebush, A., Wright-Costello, B., & Fendt, C. (2019). Language matters: developing educators' expertise for English learners in linguistically diverse communities. *Language, Culture and Curriculum, 32*(1), 63-77. https://doi.org/10.1080/07908318.2018.1493493

Jacobs, J., Assaf, L. C., & Lee, K. S. (2011). Professional development for teacher educators: conflicts between critical reflection and instructional-based strategies. *Professional Development in Education*, *37*(4), 499-512.https://doi.org/10.1080/19415257.2010.533587

Jaggars, S. & Xu, D. (2016). How do online course design features influence student performance? *Computers & Education, 98*, 270-284. https://doi.org/10.1016/j.compedu.2016.01.014

Kamps, D., Abbott, M., Greenwood, C., Arreaga-Mayer, C., Wills, H., Longstaff, J., ... & Walton, C. (2007). Use of evidence-based, small-group reading instruction for English language learners in elementary grades: Secondary-tier intervention. *Learning Disability Quarterly*, *30*(3), 153-168.https://doi.org/10.2307/30035561

Kebritchi, M., Lipschuetz, A., & Santiague, L. (2017). Issues and challenges for teaching successful online courses in higher education: A literature review. *Journal of Educational Technology Systems*, *46*(1), 4-29.https://doi.org/10.1177/0047239516661713

Kumi–Yeboah, A., Dogbey, J., & Yuan, G. (2018). Exploring factors that promote online learning experiences and academic self-concept of minority high school students. *Journal of Research on Technology in Education, 50*(1), 1-17.

Lawless, K. A., & Pellegrino, J. W. (2007). Professional development in integrating technology into teaching and learning: Knowns, unknowns, and ways to pursue better questions and answers. *Review of Educational Research*, *77*(4), 575-614.https://doi.org/10.3102/0034654307309921

Lesaux, N. K., & Samson, J. F. (2009). Language-minority learners in special education: Rates and predictors of identification for services. *Journal of Learning Disabilities, 42*(2), 148-162. https://doi.org/10.1177/0022219408326221

Lucas, T., Villegas, A., &Freedson-Gonzalez, M., (2008). Linguistically responsive teacher education: Preparing classroom teachers to teach English language learners. *Journal of Teacher Education, 59*(4), 361-373. https://doi.org/10.1177/0022487108322110

Mitchel, C. (2020, February 18). The nation's English-Learner population has surged: 3 things to know. *Education Week.* *https://www.edweek.org/leadership/the-nations-english-learner-population-has-surged-3-things-to-know/2020/02*

Moon, J., Passmore, C., Reiser, B., & Michaels, S. (2014). Beyond comparisons of online versus face-to-face PD: Commentary in response to Fishman et al., "Comparing the impact of online and face-to-face professional development in the context of curriculum implementation. *Journal of Teacher Education, 65*(2), 172-176. https://doi.org/10.1177/0022487113511497

Morgan, P. L., & Farkas, G. (2016). Are we helping all the children that we are supposed to be helping?. *Educational Researcher*, *45*(3), 226-228. https://doi.org/10.3102/0013189X16644607

National Center for Education Statistics at IES (2021). Teacher Training to meet diverse student needs before entering the classroom teacher preparation in 2017-2018: A Publication of the Institute of Education Sciences. NCES 2021046https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2021046

National Center for Education Statistics (2021a). English language learners in public schools. The Condition of Education. https://nces.ed.gov/programs/coe/pdf/2021/cgf_508c.pdf

National Center for Education Statistics. (2020). Characteristics of public elementary and secondary school teachers in the United States: Results from the 2015-16 National Teacher and Principal Survey. First Look. https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2017070

National Center for Education Statistics, Common Core of Data (CCD). (2020a). Local education agency universe survey, 2000-01 through 2016-17. https://ncela.ed.gov/files/fast_facts/19-0193_Del4.4_ELDemographicTrends_021220_508.pdf

National Center for Education Statistics. (2018). Percentage public school teachers who teach English Language Learner (ELL) students and students with disabilities and percentage with selected qualifications or coursework, by selected teacher and school characteristics: 2017–18. Table 209.42.https://nces.ed.gov/programs/digest/d19/tables/dt19_209.42.asp

Nguyen, H. T. (2012). General education and special education teachers collaborate to support English language learners with learning disabilities. *Issues in Teacher Education, 21*(1), 127-152.

Oh, K., Murawski, W., & Nussli, N. (2017). An international immersion into co-teaching: A wake-up call for teacher candidates in general and special education. *The Journal of Special Education Apprenticeship*, *6*(1), 2.

Orosco, M. J., & O'Connor, R. (2014). Culturally responsive instruction for English language learners with learning disabilities. *Journal of Learning Disabilities, 47*(6), 515-531.https://doi.org/10.1177/0022219413476553

Paneque, O. M., & Barbetta, P. M. (2006). A study of teacher efficacy of special education teachers of English language learners with disabilities. *Bilingual Research Journal*, *30*(1), 171-193.

Parsons, S., Hutchison, A., Hall, L., Ward Parsons, A., Ives, S., Bruyning Leggett, A. (2019). U.S. teachers' perceptions of online professional development. *Teaching and Teacher Education, 82*, 33-42. https://doi.org/10.1016/j.tate.2019.03.006

Powell, C. &Bodur, Y. (2019). Teachers' perceptions of an online professional development experience: Implications for a design and implementation framework. *Teaching and Teacher Education*, *77*, 19-30. https://doi.org/10.1016/j.tate.2018.09.004

Russell, M., Kleiman, G., Carey, R., & Douglas, J. (2009). Comparing self-paced and cohort-based online courses for teachers. *Journal of Research on Technology in Education*, *41*(4), 443–466.https://doi.org/10.1080/15391523.2009.10782538

Sullivan, A. L. (2011). Disproportionality in special education identification and placement of English language learners. *Exceptional Children*, 77(3), 317-334.https://doi.org/10.1177/001440291107700304

Surrette, T., & Johnson, C. (2015) Assessing the ability of an online environment to facilitate the critical features of teacher professional development. *School Science and Mathematics*, *115*(6), 260-270. https://doi.org/10.1111/ssm.12132

Swan, K. (2019). Social construction of knowledge and the community of inquiry framework. In *Open and distance education theory revisited* (pp. 57-65). Springer, Singapore.

Swanson, H. L., Kong, J., Petcu, S. D., & Asencio Pimentel, M. F. (2020). Can difficulties in language acquisition and specific learning disabilities be separated among English learners?*Exceptional Children*, *86*(3), 293-309.https://doi.org/10.1177/0014402919893931.

Torun, E. D. (2013). Synchronous interaction in online learning environments with Adobe Connect Pro. *Procedia-Social and Behavioral Sciences*, *106*, 2492-2499.

Tschannen-Moran, M. & McMaster, P. (2009). Sources of self-efficacy: Four professional development formats and their relationship to self-efficacy and implementation of a new teaching strategy. *The Elementary School Journal*, *110*(2), 229-245. https://doi.org/10.1086/605771

Uzuner Smith, S. (2014). Frameworks shaping an online professional development program for K-12 teachers of ELLs: Toward supporting the sharing of ideas for empowering classroom teachers online. *TESOL Journal*, *5*(3), 444-464. https://doi.org/10.1002/tesj.154

Wagner, R. K., Francis, D. J., & Morris, R. D. (2005). Identifying English language learners with learning disabilities: Key challenges and possible approaches. *Learning Disabilities Research & Practice*, *20*(1), 6-15.https://doi.org/10.1111/j.1540-5826.2005.00115.x

Wang, P., & Woolf, S. B. (2015). *Trends and Issues in Bilingual Special Education Teacher Preparation: A Literature Review*,*6*, 26.http://fordham.bepress.com/jmer/vol6/iss1/4

Wayne, A. J., Yoon, K. S., Zhu, P., Cronen, S., & Garet, M. S. (2008). Experimenting with teacher professional development: Motives and methods. *Educational Researcher, 37*(8), 469-479.https://doi.org/10.3102/0013189X08327154

Yoon, S. A., Miller, K., Richman, T., Wendel, D., Schoenfeld, I., Anderson, E., & Shim, J. (2020). Encouraging Collaboration and Building Community in Online Asynchronous Professional Development: Designing for Social Capital. *International Journal of Computer-Supported Collaborative Learning*, *15*(3), 351–371.https://doi.org/10.1007/s11412-020-09326-2

Yuan, J., & Kim, C. (2014). Guidelines for facilitating the development of learning communities in online courses. *Journal of ComputerAssisted Learning, 30*(3), 220-232.https://doi.org/10.1111/jcal.12042

Zee, M. &Koomen, H. (2016). Teacher self-efficacy and its effects on classroom processes, student academic adjustment, and teacher well-being: A synthesis of 40 years of research. *Review of Educational Research, 86*(4), 981-1015. https://doi.org/10.3102/003465431562801

Zetlin, A., Beltran, D., Salcido, P., Gonzalez, T. & Reyes, T. (2011). Building a Pathway of Optimal Support for English Language Learners in Special Education. *Teacher Education and Special Education, 34*(1), 59-70.https://doi.org/10.1177/0888406410380423

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