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Teacher self-efficacy in relation to cultural and linguistic diversity in K–12 settings: a systematic review

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Global migration continues to significantly increase the cultural and linguistic diversity of societies and schools. Consequently, teachers must differentiate instruction and demonstrate cultural awareness to achieve educational equity in their classrooms. However, the extent to which teachers feel efficacious in doing so remains unclear. Previous reviews indicate that teacher self-efficacy impacts wellbeing and instruction. However, there do not appear any reviews that have extended our understanding of the situatedness of self-efficacy within culturally and linguistically diverse (CLD) classrooms. Using the job demands-resources theory as our guiding theoretical framework, we conducted a systematic review (2014–2023) to analyze factors supporting teacher self-efficacy in CLD classrooms and its implications for work outcomes and job performance. There were 19 studies included in the review. Results showed CLD composition positively relates to teacher self-efficacy in teaching in multicultural classrooms. The review revealed multiple job resources, categorized as either universal or unique to CLD settings, that foster teacher self-efficacy within CLD classrooms. Depth of experience with CLD learners was found to be an important characteristic of teachers with high self-efficacy. Teacher self-efficacy related negatively to burnout and positively to job performance. Extending the JD-R model, teacher self-efficacy also emerged as an important predictor of various cognitive outcomes, including teachers attitudes toward diversity and expectations for students. This review shows teacher self-efficacy in CLD classrooms is an emerging and important area of research. The findings presented offer practical implications for improving teacher self-efficacy in CLD classrooms and highlight areas for future research.

KEYWORDS

teacher self-efficacy, cultural and linguistic diversity, job demands-resources model, teaching quality, teacher well-being

Introduction

Over the last decade, increases in immigration have led to significant increases in the cultural diversity of classrooms worldwide ([Organisation for Economic Co-operation and Development \(OECD\)](https://www.oecd.org/), 2020). Research has found that in the face of such diversity, students learn best in an environment where their cultural and linguistic identities are affirmed and embraced as an added value in the learning process ([Cummins, 2001](#); [Celeste et al., 2019](#)). However, research indicates that teachers perceive cultural and linguistic diversity as adding to their workload ([Fine-Davis and Faas, 2014](#)) and contributing as a source of stress ([Lambert et al., 2015](#)). Class CLD has also been found to associate positively with teacher burnout ([Hoglund et al., 2015](#)). Concerningly, rather than incorporate students' backgrounds as a resource for learning, prior studies find teachers often fail to acknowledge students' backgrounds altogether ([Lambert et al., 2015](#); [Fine-Davis and Faas, 2014](#)) and have less complex and engaging interactions with their CLD learners (see [Langeloo et al., 2019](#)).

Self-efficacy, defined by Bandura (1977) as “the conviction that one can successfully execute the behavior required to produce the outcomes” (p. 193), is an important determinant of behavior and persistence in the face of challenges. JD-R theory, a prominent theoretical model in organizational psychology, recognizes self-efficacy as a personal resource that positively influences motivation and buffers the impact of job demands on work strain (Bakker and Demerouti, 2007; Xanthopoulou et al., 2013). JD-R theory also recognizes external resources, referred to as job resources, as important to fostering self-efficacy (Bakker and Demerouti, 2017). From a JD-R perspective, the earlier mentioned reports of teachers experiencing their CLD classrooms negatively suggests teachers may lack sufficient self-efficacy when it comes to teaching CLD learners. This is concerning given the abundance of empirical research linking teacher self-efficacy positively to teacher wellbeing and instructional quality (Skaalvik and Skaalvik, 2010; Tschannen-Moran et al., 1998; Zee and Koomen, 2016; Betoret, 2009). Moreover, high self-efficacy has been linked to greater persistence with struggling students, willingness to try new ideas (Tschannen-Moran et al., 1998) and higher levels of sensitivity and support (Holzberger et al., 2013).

The need for high-quality instruction in CLD classrooms is particularly critical due to the challenges faced by CLD learners and the inevitable tensions among peers from diverse cultural and linguistic backgrounds (Gay, 1981). These challenges are reflected in the persistent trend of CLD learners experiencing lower levels of school belonging (Cerna et al., 2021; Schachner et al., 2019) and academic achievement compared to their native peers (Schnepf, 2007; Cerna et al., 2021; Frønes et al., 2020). Studies find that CLD students learn best when their cultural backgrounds, perspectives, and prior experiences are incorporated into the classroom as a basis for learning (Aronson and Laughter, 2016). This includes giving students opportunities to practice translanguaging, that is allowing them to use all of their linguistic resources, to foster deeper engagement and understanding of school subjects across languages (Baker, 2001; García, 2009). Bosma et al. (2023) highlight that translanguaging pedagogical strategies, such as multilingual reading and writing and multilingual label quests, support the development of CLD students' lexicons. These strategies, along with those that incorporate students' background into the curriculum, collectively align with what is commonly referred to as culturally responsive teaching (Gay, 2002; García and Wei, 2014). Research also shows that CLD students experienced greater integration in classrooms where teachers established personal and academic connections with CLD students, group students from different linguistic backgrounds for complex tasks, and employ supportive classroom management practices (Kibler et al., 2019).

Yet, while these studies reveal the differences that teaching practices can make when applied in CLD classrooms, research shows teachers predominately ignore the cultural and linguistic resources present in CLD classrooms (Xu and Krulatz, 2023; Gogolin, 2021). Instead, they operate in what Gogolin (2002) refers to as the “monolingual and multicultural habitus,” which is described as acting under the assumption that all learners come to the classroom with the same background knowledge, skills and resources as those belonging to the majority culture. From a self-efficacy perspective, this tendency, and the avoidance of implementing culturally responsive practices, likely stems from teachers' lacking a belief in their abilities to draw upon students' CLD backgrounds as a resource.

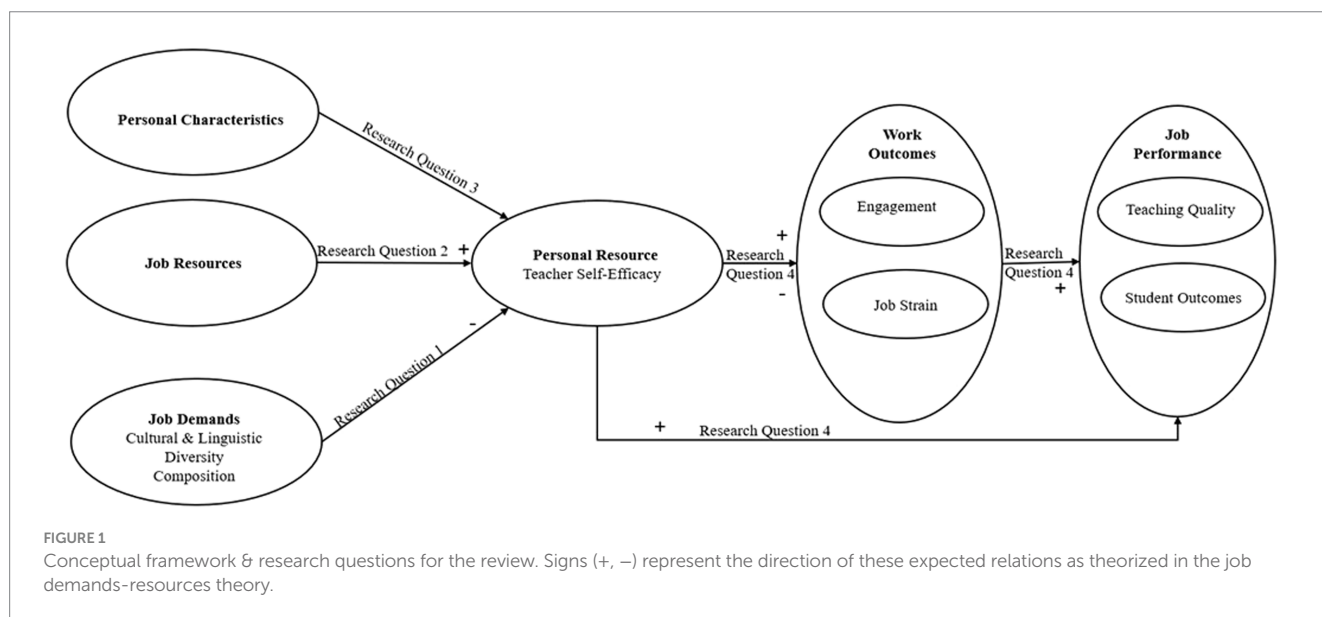
Given the wealth of empirical evidence linking teacher self-efficacy to teaching quality (Zee and Koomen, 2016; Tschannen-Moran et al., 1998; Klassen et al., 2011), it is thus expected that teacher self-efficacy acts as an important determinant of teaching quality in CLD classrooms.

However, teacher self-efficacy within the context of CLD classrooms appears largely unexplored in earlier reviews of the self-efficacy literature. Klassen et al. (2011) assessed the status of self-efficacy research from 1998 to 2009 and found investigations of general self-efficacy were most prominent in the literature, leading the authors to conclude that educational researchers “continue to neglect important facets of local contexts” (p. 40). Zee and Koomen's (2016) review of the self-efficacy literature from 1976 to 2014, similarly revealed limited attention to CLD contexts prior to 2014, with only four studies commented on for relations between teacher self-efficacy and teachers attitudes toward sociocultural diversity, and inclusive education. These studies found that higher self-efficacy associated positively with teachers holding more favorable attitudes toward sociocultural diversity and negatively to teachers' referrals of students for special needs (Zee and Koomen, 2016). In concluding their reviews, both Klassen et al. (2011) and Zee and Koomen (2016) also highlighted that sources of self-efficacy appear understudied.

Despite a lack of coverage in these earlier reviews, the increase in CLD classrooms over the last decade (European Commission, 2024) underscores the need for understanding the significance of teacher self-efficacy within these classrooms. This understanding is crucial for school administrators and policymakers to effectively support teachers in areas where they may feel less efficacious, and this knowledge can inform the design of professional development initiatives and help school leaders to identify classrooms most in need of support. To the best of our knowledge, there has not yet been a synthesis of the literature from 2014 which specifically addresses teacher self-efficacy within CLD classrooms.

We therefore aimed to synthesis the literature on teacher self-efficacy in CLD classrooms from 2014 to present and drew on the JD-R theory as our conceptual framework (see Figure 1). JD-R theory firstly posits that characteristics of any job can be categorized as either job demands or job resources (Demerouti et al., 2001). It is then theorized that job resources and personal resources instigate motivational processes, while job demands a trigger health impairment processes (Bakker and Demerouti, 2007, 2008; Demerouti et al., 2001). Although the JD-R model does not explicitly address the role of personal characteristics, previous research indicates teachers from the majority culture often have limited experiences in CLD environments (Gay and Howard, 2000). As a result, it is expected that personal characteristics, such as experience, may play a significant role in shaping teachers' sense of self-efficacy within this context. We therefore extend the JD-R model to also assess the role of personal characteristics as an antecedent to teacher self-efficacy in CLD classrooms.

This systematic review addresses the following research questions through the lens of JD-R theory: (1) How does cultural and linguistic diversity in the classroom relate to teacher self-efficacy? (2) What job resources contribute to teacher self-efficacy in CLD schools? (3) How do personal characteristics relate to teacher self-efficacy in CLD classrooms? (4) How does teacher self-efficacy relate to teacher strain, engagement, and job performance in CLD schools? By gaining a deeper understanding of the role of teacher self-efficacy in schools, educational providers and school administrators can identify and



support the teachers most at risk of experiencing strain and providing lower teaching quality due to low self-efficacy in these contexts.

Method

This systematic review was performed in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) statement (Moher et al., 2009), following the steps outlined by Gough et al. (2017): (1) find studies within the scope (2) analyze according to a conceptual framework (3) synthesize using conceptual framework and (4) study quality appraisal.

Inclusion and exclusion criteria

To be included in our review, articles needed to meet the following criteria defined *a priori*: (1) provide a measure of teacher self-efficacy, (2) be situated in the K–12 context, (3) contain information about the cultural and linguistic diversity of the context (4) be published 2014 or after (5) be peer reviewed and (6) published in English. Qualitative, quantitative, and mix method studies were all included. Studies were excluded from the study on target group (i.e., preschool children, children with special needs, pre-service or university teachers) and or topic (i.e., without information pertaining to both teacher self-efficacy and cultural and linguistic diversity of the context). Studies published prior to 2014 were also excluded from the review for the purpose of building on the findings of previous reviews and capturing literature published within the most recent context of global migration. Finally, articles published in non-peer-reviewed journals and gray literature were also excluded for the purpose of limiting the scope of the review and ensuring its quality.

Search strategy and data extraction

To identify articles within the scope of our review, we conducted a systematic literature electronic search of English language articles in

four databases: ERIC, SOCindex, Academic Premier, and Web of Science. The original search was conducted in November 2021, with a follow up search done in September 2023. The same search string was used for both searches (see Table 1). This search string combined search terms related to the categories of teacher self-efficacy and cultural and linguistic diversity. Within each category, the Boolean operator ‘OR’ was used to separate individual terms, while ‘AND’ was used to combine the categories of teacher self-efficacy and cultural and linguistic diversity.

The identified articles were then uploaded to EPPI Reviewer (Thomas et al., 2023) for screening and data extraction. Once duplicates were removed, the first and second authors independently screened the title and abstracts of identified articles. Thereafter, the full texts of potential studies were retrieved and both authors screened 10 full texts to establish interrater agreement of the coding criteria. The first author carried out the remaining screening of full texts. In cases where inclusion uncertainty arose, the first author sought the second opinion of the second author. Once the articles to be included in the review had been identified, the first author extracted detailed information about each study’s aims, research design, sample, measure of variables, methodology, and results in accordance with the research questions of the review. This information was then used for subsequent analysis and synthesis.

Relevance and quality appraisal

In addition to data extraction, a quality and relevance appraisal for each study was carried out using the seven questions provided on the Mixed Methods Appraisal Tool (MMAT) within EPPI reviewer (Hong et al., 2018; Thomas et al., 2023). The MMAT was selected as the most suitable appraisal tool because it can be applied to a variety of research designs. The aim of this appraisal was twofold. Firstly, it aimed to assess the relevance of the study to addressing the research questions of the present systematic review. Secondly, it aimed to evaluate the technical quality of each included study’s method (Liabo et al., 2017). To evaluate each study’s relevance, articles were assessed in relation to the research questions of the present review and

TABLE 1 Search terms.

Category	Search string
Cultural and linguistically diversity	"immigrant student*" OR immigrant OR refugee OR diversity OR "diverse" OR "CLD" OR ELL OR ESL OR "minority language" OR "home language" OR "mother tongue" OR multilingual OR bilingual OR minority OR "emergent bilinguals"
Teacher self-efficacy	"teacher self-efficacy" OR "teacher self efficacy" OR "CRT efficacy" OR "self-efficacy in culturally responsive pedagogy" OR "self efficacy of the teacher" OR "self-efficacy of the teacher" OR "teaching efficacy" OR "teachers' efficacy" OR "immigration related self-efficacy" OR "teachers' self-efficacy"

assigned a relevance of high, medium, or low. A designation of high indicates the article possesses significant information and alignment with the aims of the review. Whereas studies with a minor contributions and alignment with the aims of the review were designated as low relevance.

The MMAT was then used to assess the technical quality for each of the 19 included studies. Once screened for the clarity of research questions and applicability of data to address the stated research questions, each study was assessed upon five items on the MMAT and reported as "yes," "no," or "can't tell." Items on the MMAT address studies' sampling procedures, risk of non-response bias, data collection methods, measurement and analysis, and alignment to research questions. According to the MMAT criteria, studies were evaluated according to how they met each of the criteria. The first author and second author appraised relevance and applied the MMAT to five articles independently and then met to discuss and establish agreement. Thereafter the first author carried out the remaining relevance and quality appraisals on the last 14 articles and consulted an external reviewer for appraisal of articles for which the first author was uncertain.

Data synthesis

Following the data extraction and quality appraisal, we used a thematic summary approach to synthesize studies based on the job-demands resources model. A thematic summary was determined to be the most appropriate synthesis method given our use of the JD-R model as a conceptual framework defined *a priori* (Thomas et al., 2017). We therefore mapped the extracted data onto our pre-specified conceptual model making use of the JD-R model. Specifically, the extracted data was categorized according to (1) the relationship identified between cultural and linguistic diversity and teacher self-efficacy, (2) job resources found to associate with teacher self-efficacy, (3) personal characteristics related to teacher self-efficacy, and (4) teacher self-efficacy in relation to teachers' work outcomes and job performance. This mapping enabled the relations found across the included studies to be compared and analyzed despite their heterogeneity (Thomas et al., 2017).

Results

Study identification

The original electronic search in November 2021 yielded 186 articles across four databases: ERIC, SOCindex, Academic Premier ($n = 110$), and Web of Science ($n = 76$). After removing 56 duplicates, 130 articles remained for possible inclusion. Initial screening of titles

and abstracts excluded 74 articles that did not meet inclusion criteria, with a 95% interrater agreement among reviewers. Discrepancies in coding ($n = 7$) were resolved through discussion. Articles were excluded based on target group ($n = 67$) and topic ($n = 7$), leaving 56 articles for full-text screening. An additional 44 articles were excluded during full-text screening due to target group ($n = 18$) and topic ($n = 22$), resulting in 12 articles included in the review. A follow-up search in September 2023 identified 67 potential articles. After removing 16 duplicates, 51 articles were screened on title and abstract. In this initial screening, 30 articles were excluded on the basis of not meeting inclusion criteria. This resulted in the retrieval and screening of full texts for the 21 remaining articles. There were 14 additional articles excluded due to failure to meet the inclusion criteria. Seven new studies were identified for inclusion, bringing the final total to 19 studies in the present review. An overview of the search process is provided in Figure 2.

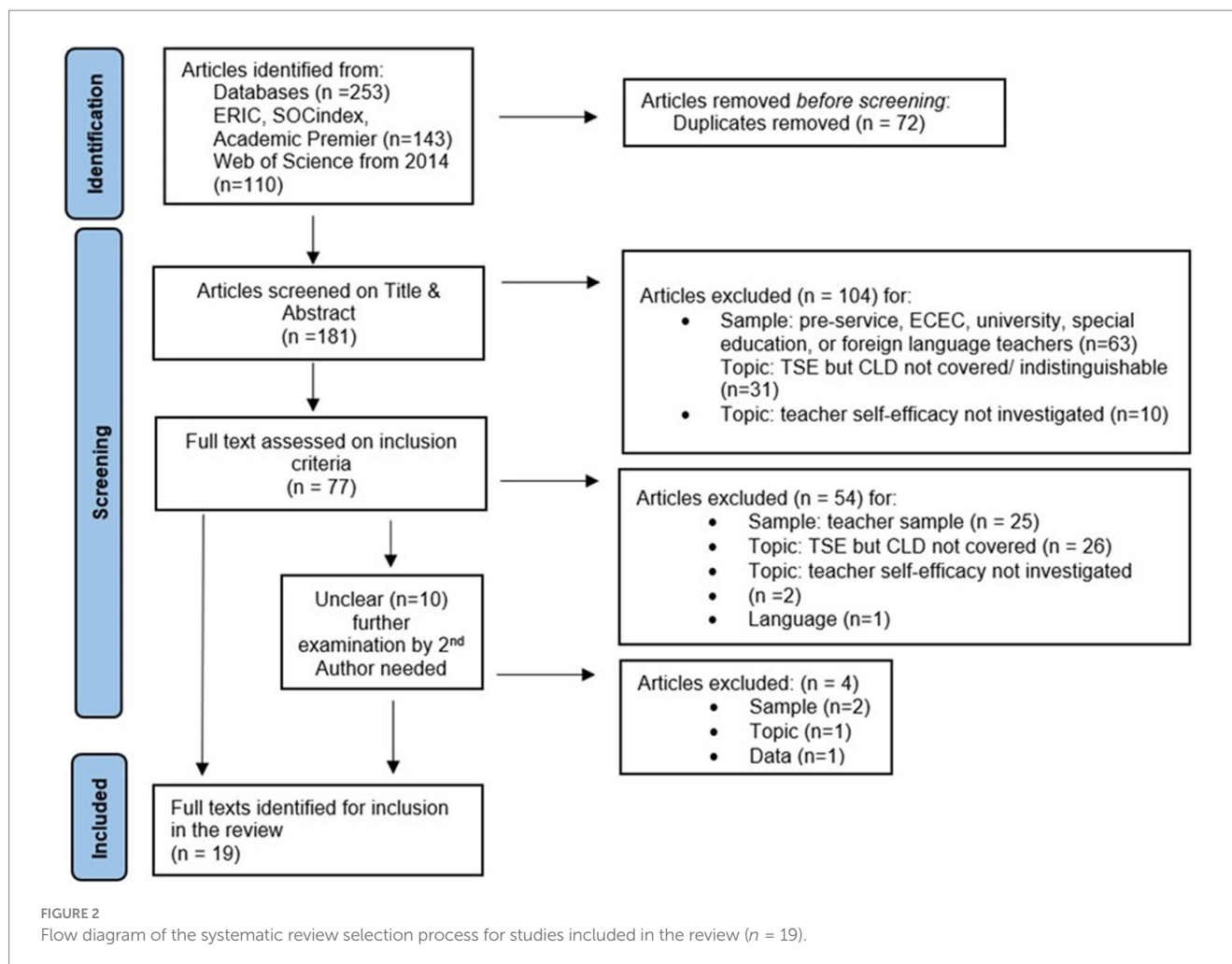
Study characteristics

A summary of study characteristics for the 19 studies included in the review can be found in Table 2. The cumulative sample consisted of 113, 665 teachers representing 51 different countries worldwide. The significance of this sample size was predominately due to Choi and Mao's (2021) inclusion of TALIS 2018 data from 47 different countries. The USA was the most frequently represented across studies, appearing in nine of the 19 articles, with six studies conducted exclusively within the USA. Lower secondary classrooms (6–8th grades) were the most represented across studies ($n = 9$), followed by the primary levels ($n = 5$), the remaining studies were mixed investigations of K–12 ($n = 5$). Most studies were quantitative and cross-sectional in their design, though the sample also included four mixed methods and two qualitative studies. Of the 13 quantitative designs, seven studies performed a secondary analysis of data collected from various international and national data sets. These included the Teaching and Learning International Survey (TALIS) ($n = 4$), Trends in International Mathematics and Science Study (TIMSS) ($n = 1$), Institute of Educational Sciences Schools and Staffing Survey (SASS) ($n = 1$), and Programme for International Student (PISA) ($n = 1$).

Operationalizations of constructs across studies

Teacher self-efficacy

The included studies investigated both general teacher self-efficacy and various specific dimensions relevant to different contexts. The most commonly examined dimension was teacher self-efficacy within CLD classrooms, which could be categorized into three groups: (1) teaching in multicultural classrooms: studies focused on teacher's confidence in enacting culturally responsive pedagogies and reducing



stereotypes (Choi, 2023; Choi and Lee, 2020; Choi and Mao, 2021; Mo et al., 2021; Gülbahar et al., 2022), (2) teaching students of diverse backgrounds: studies explored teacher confidence, preparedness, and collective efficacy in working with students from immigrant, refugee, socio-diverse, or minority backgrounds (Gutentag et al., 2018; Romijn et al., 2020; Alrawashdeh and Kunt, 2022; Aguirre-Muñoz et al., 2023; Kim et al., 2023; Lopez and Santibanez, 2018; Haworth et al., 2015), (3) teaching specific content areas to CLD learners: studies examined teacher self-efficacy in specific content areas or pedagogical practices for CLD learners, such as supporting English learners in mathematics (Flores et al., 2015; Depiper et al., 2021). In addition to examining these dimensions of teacher self-efficacy in CLD classrooms, other studies addressed self-efficacy in general content areas, such as teaching science or socio-scientific issues (Collie et al., 2020; Toropova et al., 2019; Maass et al., 2022; Sorge et al., 2023), or general teacher self-efficacy (Geerlings et al., 2018; Romijn et al., 2020). Thus, the studies covered both general and subject-specific measures of teacher self-efficacy, as well as specific domains within multicultural classrooms.

There was significant variation in how self-efficacy dimensions were investigated and operationalized across studies. For example, Geerlings et al. (2018) and Romijn et al. (2020) both used Tschannen-Moran and Woolfolk Hoy's (2001) scale to measure general self-efficacy but made notable adaptations. Geerlings et al. (2018) aggregated individual student-specific self-efficacy data to the class

level and added emotional support as a fourth dimension. Romijn et al. (2020) selected items from each of Tschannen-Moran and Hoy's dimensions, using only four items in total.

In contrast, teacher self-efficacy in teaching in multicultural classrooms was more consistently measured. Four out of five studies used an OECD validated 4-point Likert scale assessing confidence in coping with multicultural classroom challenges, adapting teaching, fostering cooperation among students, raising cultural awareness, and reducing ethnic stereotyping (Choi, 2023; Mo et al., 2021; Choi and Lee, 2020; Choi and Mao, 2021). However, measuring self-efficacy in responding to CLD learners showed more variation. Romijn et al. (2020) used two items on teacher confidence, Gutentag et al. (2018) used nine statements based on Tatar et al. (2011), and Kim et al. (2023) had three items about preparing, engaging, and supporting minority children. Meanwhile, Aguirre-Muñoz et al. (2023) provided qualitative observations.

Cultural and linguistic diversity

We also found that studies varied significantly in how they defined and measured cultural and linguistic diversity. The majority of studies reported and used school cultural and linguistic diversity as their basis of analysis by asking teachers or principals to report on the proportion of either (a) second language students, (b) students with cultural diversity, or (c) immigrant students, at the school (Choi, 2023; Sorge

TABLE 2 Summary of study characteristics.

	Author	Country	Sample	Grade	CLD focus	CLD measure	TSE focus	RQ1	RQ2 & 3	RQ4	QA	REL
								CLD – TSE	Antecedents	Outcomes		
1	Aguirre-Muñoz et al. (2023)	USA	2 Ts	Primary	Dual Language Immersion Classrooms	School context 35% English learners	TSMC	High TSMC	Differentiation, Advocacy, Workplace bullying stressors	Engagement	5	H
2	Alrawashdeh and Kunt (2022)	Jordan	112	K–12	Refugees	Experience teaching refugees	Teaching English to Refugees	N/A	Teachers’ perceived preparation	Awareness of Ss psychological needs & linguistic challenges	3	H
3	Choi (2023)	USA	2050 Ts 165 Sch	Lower secondary	Proportion of Second-Language students	TALIS 2018% school unclear who reported	TSMC	Positive at the school level	Feedback networks and distributed leadership indirectly	N/A	5	H
4	Choi and Lee (2020)	Korea USA	696 Ts 152 Sch 2,050 Ts 165 Sch	Lower secondary	Proportion of Second-Language Students	TALIS 2018 Teacher survey school % aggregated to country	TSMC	Positive at the country level	PD in a multicultural or multilingual setting in the past 12 months	School Climate	4	H
5	Choi and Mao (2021)	47 OECD countries	86,750 Ts	Lower secondary	Proportion of Second-Language students	TALIS 2018 Principal survey	TSMC	Positive at the country level	PD in a multicultural or multilingual setting in the past 12 months Teacher Autonomy	N/A	4	H
6	Collie et al. (2020)	Australia Chile Czech Republic Germany South Korea Portugal Spain USA	14,182 Ts 57,131 Ss	Secondary	% other language speakers Special needs low SES	PISA 2015 Principal survey School average	TSE in teaching science	No relations found at the school level	Teacher Adaptability	Student self-efficacy in Science	3	M
7	Depiper et al. (2021)	USA	98 Ts	Lower Secondary	English Language Learners	Publicly available data identified districts with the largest EL population	TSE in mathematics instruction for ELS	N/A	PD Program	N/A	4	L
8	Flores et al. (2015)	USA	100 Ts	Secondary	English Language Learners	Publicly available data identified high need school districts	TSE in mathematics TSE in science	N/A	PD Program	N/A	1	L

(Continued)

TABLE 2 (Continued)

	Author	Country	Sample	Grade	CLD focus	CLD measure	TSE focus	RQ1	RQ2 & 3	RQ4	QA	REL
								CLD – TSE	Antecedents	Outcomes		
9	Geerlings et al. (2018)	Netherlands	40 Ts 112 native Ss 180 ethnic minority Ss	Grade 4–6	Ethnic minorities: Turkish, Moroccan, Eastern European, Surinamese/ Antillean	Student reported parents' country of birth and ethnic self-label Teacher reported	Student specific TSE	Positive relations at the class level	Students internalizing/ externalizing behaviors	N/A	3	H
10	Gülbahar et al. (2022)	Turkey	355 Ts	K–12	Refugees	PIKTES Project	Teachers' efficacy for classroom diversity	N/A	Work Engagement	Teamwork attitudes	3	H
11	Gutentag et al. (2018)	Israel	136 Ts	Primary Secondary	Immigrant students	Teacher reported % of immigrant students in their school & class	Immigration related TSE	No relation found at the school level	Perceptions of immigrant students as an asset vs. problem	Diversity related burnout	3	H
12	Haworth et al. (2015)	New Zealand	6 Ts 2 Sch	Primary	English language learners	School percentage	Collective self-efficacy Cultural efficacy	N/A	School SES Performance on the national standards exam	N/A	4	L
13	Lopez and Santibanez (2018)	USA	3,570 Ts	4th grade 8th grade	Emergent bilinguals	SASS survey Teachers reported % of emergent bilingual students in their class	Preparedness self-efficacy	Negative relations at the state level	State language educational policy	General teaching satisfaction Student achievement	3	L
14	Kim et al. (2023)	South Korea	149 Ts	K–12	Minority (multicultural family)	Teachers reported % of minority children in class	Personal teacher efficacy with minorities	N/A	N/A	Perception of minority parents, high expectations of minorities, school experience	3	H
15	Maass et al. (2022)	Cyprus, Germany, Malta, the Netherlands, Spain, Turkey	311 Ts	Lower Secondary	Cultural diversity	Teachers rating of cultural diversity at school	Teacher self-efficacy in raising socio-scientific issues	Negative relations between cultural diversity at school and the impact of PD	PD Program	N/A	3	H

(Continued)

TABLE 2 (Continued)

	Author	Country	Sample	Grade	CLD focus	CLD measure	TSE focus	RQ1	RQ2 & 3	RQ4	QA	REL
								CLD – TSE	Antecedents	Outcomes		
16	Mo et al. (2021)	Finland	2,174 Ts 139 Sch	Lower Secondary	Immigrant/Refugees <ul style="list-style-type: none"> • other first language • immigrant • refugees 	TALIS 2018 Teacher survey %	Teacher self-efficacy in multicultural classrooms	Positive relations at the class level No relations found at the school level	Study abroad experiences Professional learning communities	N/A	5	H
17	Romijn et al. (2020)	England Italy Netherlands Poland	269 Ts	ECEC Primary	Socio-cultural diversity Turkish, North-African, Romani low SES low-income native-born	ISOTIS 2018 Teachers estimate of school %	General Teacher Self Efficacy Diversity related self-efficacy	Positive relations	N/A	Inter-cultural classroom processes	3	H
18	Sorge et al. (2023)	Cyprus, Germany, Malta, the Netherlands, Spain, Turkey	319 Ts	Lower secondary	Cultural diversity	Ts reported diversity in class %	Self-efficacy beliefs on supporting intercultural learning	N/A	PD Program	Intercultural practices	5	H
19	Toropova et al. (2019)	Sweden	296 Ts 5,573 Ss 153 Sch	Lower Secondary	Socio-economic and immigrant background	TIMSS 2011 students' reported use of test language & number of books in the home	Teacher self-efficacy in teaching mathematics	Positive relations at the class level	Students mathematics achievement in classrooms	Ss perceived instructional quality	4	H

TSE, Teacher Self-Efficacy; TSMC, Teacher Self-Efficacy in Multicultural Classrooms; CLD, culturally and linguistically diverse; Ts, teachers; Sch, schools; Ss, students; Q, Criteria met out of the 5 MMAT criteria; R, relevance rating; H, high; M, medium; L, low.

et al., 2023; Maass et al., 2022; Gutentag et al., 2018; Choi and Mao, 2021; Choi and Lee, 2020). Romijn et al. (2020) and Collie et al. (2020) also used school level diversity but created a socio-cultural diversity statistic based on an average of the reported percentages for the proportion of heritage cultures, low socioeconomic status (SES), and low education combined.

Four studies reported on cultural and linguistic diversity at the class level. However, these studies also varied in their measurement of cultural and linguistic diversity. Similar to the combined school composition statistic of Romijn et al. (2020) and Collie et al. (2020), Mo et al. (2021) asked teachers to provide classroom percentage estimates of students (1) *who spoke a different first language at home*, (2) *were from migrant backgrounds*, and (3) *the proportion of refugees*. These proportions were then averaged across classrooms to determine a diversity composition for the school. Conversely, Kim et al. (2023) and Lopez and Santibanez (2018) reported teachers' estimates of the proportion of multicultural children or emerging bilinguals in their respective classrooms. Meanwhile, Toropova et al. (2019) and Geerlings et al. (2018) used information gained directly from students. Toropova et al. (2019) used students' indication of how often they spoke the majority language (of Swedish) at home on a range from (1) *always*, (2) *almost always*, (3) *sometimes*, and (4) *never* as a proxy for representing the classroom composition of students' immigrant backgrounds. Whereas Geerlings et al. (2018) utilized open ended questions that asked students to report their parents' country of birth and identify their own self-labeled ethnicity. Student responses were then triangulated with those of their teachers' own reports.

Quality assessment of studies

The quality assessment revealed the 19 included studies varied in their methodological quality and the risk of potential biases. Hong et al. (2018) discourage overall ratings from being given to articles and instead advise ratings to be presented in accordance with individual criteria. Using the MMAT criteria, the quantitative studies were found to be most at risk for measurement bias due to measurements of cultural and linguistic diversity, as well as non-response bias due to low response rates or insufficient detail regarding response rates. The risk for selection bias was found to be lower across studies mainly due to their use of large international and national assessments which implore a stratified random sampling strategy (Choi, 2023; Kim et al., 2023; Choi and Lee, 2020; Choi and Mao, 2021; Collie et al., 2020; Mo et al., 2021; Toropova et al., 2019). Greater validity and reliability was found for measures of teacher self-efficacy with the majority of studies using a measure based on Tschannen-Moran and Woolfolk Hoy's (2001) teacher self-efficacy scale taken from an OECD validated international assessment scale (i.e., Choi, 2023; Choi and Lee, 2020; Mo et al., 2021; Toropova et al., 2019) or adapted (Choi and Mao, 2021; Collie et al., 2020; Geerlings et al., 2018; Romijn et al., 2020; Gülbahar et al., 2022; Alrawashdeh and Kunt, 2022).

The mixed methods studies were found to vary considerably across the five MMAT criteria. While Sorge et al. (2023) met all five criteria, DePiper et al. (2021) fulfilled four out of five MMAT criteria, and Flores et al. (2015) only one out of five. Neither DePiper et al. (2021) nor Flores et al. (2015) included covariates in their analysis of professional development on teacher self-efficacy outcomes and

therefore the risk of confounding bias in these studies was high. The qualitative studies of Aguirre-Muñoz et al. (2023) and Haworth et al. (2015) had high scores on the MMAT criteria for qualitative studies. Given the variation in quality and risks for potential biases found across studies, one should be critical in interpreting the results which will now be discussed.

Study analysis

Results of the analysis are presented in Figure 3.

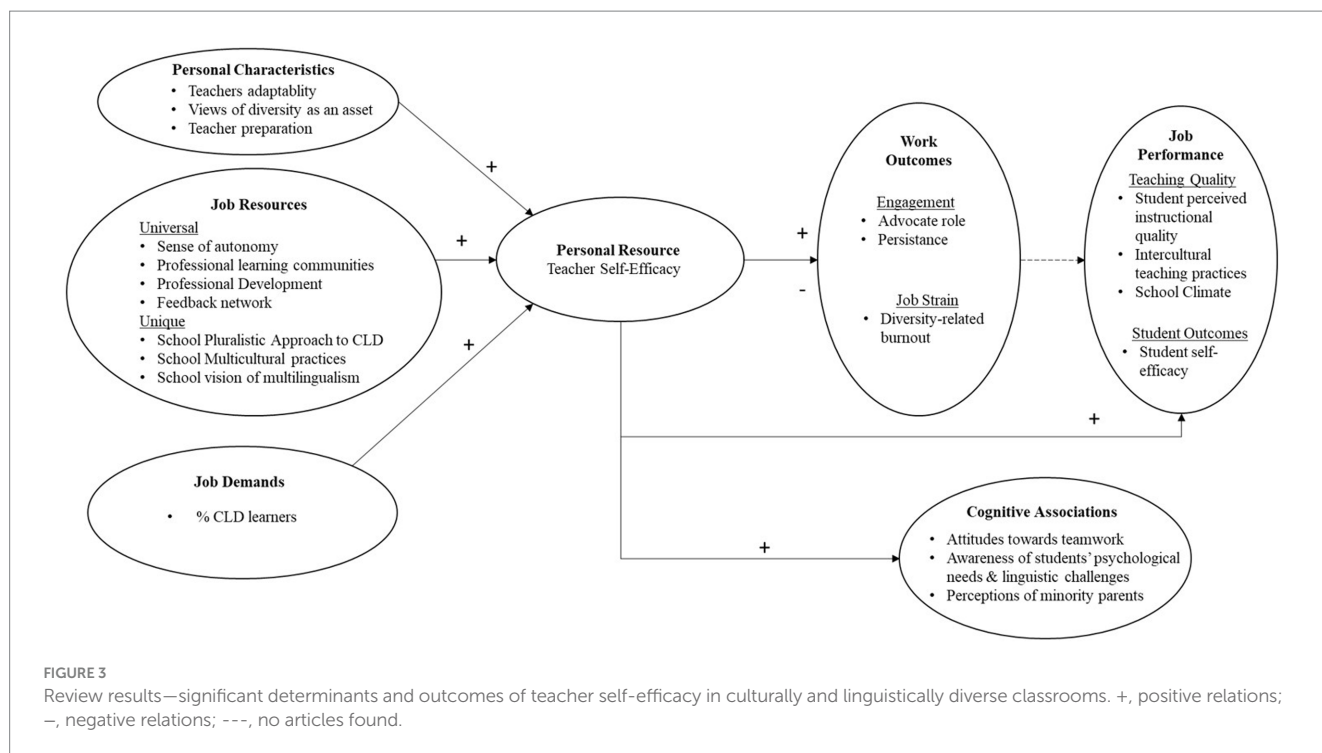
CLD and teacher self-efficacy

This review found 10 studies that reported on CLD composition in relation to teacher self-efficacy. Of these, six studies revealed a positive relationship between cultural and linguistic diversity and teacher self-efficacy (Choi, 2023; Choi and Lee, 2020; Choi and Mao, 2021; Geerlings et al., 2018; Mo et al., 2021; Romijn et al., 2020; Toropova et al., 2019). That is, higher levels of cultural and linguistic diversity were associated with higher levels of teacher self-efficacy. These findings were consistent across multiple dimensions of teacher self-efficacy, including general self-efficacy (Geerlings et al., 2018; Romijn et al., 2020), teacher self-efficacy in multicultural classrooms (Choi, 2023; Choi and Lee, 2020; Choi and Mao, 2021; Mo et al., 2021), and teacher self-efficacy in mathematics (Toropova et al., 2019).

The positive relationship between cultural and linguistic diversity and teacher self-efficacy was also found across different contexts at both the primary (Geerlings et al., 2018; Romijn et al., 2020) and secondary levels (Choi, 2023; Choi and Lee, 2020; Choi and Mao, 2021; Toropova et al., 2019). Furthermore, this relationship was found in both smaller national data sets (Geerlings et al., 2018; Romijn et al., 2020), as well as data taken from the large international datasets of TALIS 2018 and TIMSS 2011 (Choi, 2023; Choi and Lee, 2020; Choi and Mao, 2021; Toropova et al., 2019).

The strongest relationship between cultural and linguistic diversity and teacher self-efficacy was found in studies investigating the dimension of teacher self-efficacy in teaching in multicultural classrooms specifically. For example, Romijn et al. (2020) found socio-cultural diversity to be predictive of both general teacher self-efficacy and teacher self-efficacy in multicultural classrooms. Comparing the standardized regression coefficients of the relationship between socio-cultural diversity and general teacher self-efficacy ($\beta = 0.17$ at $p < 0.001$) with that of teacher self-efficacy in multicultural classrooms ($\beta = 0.40$ at $p < 0.001$), the latter appears much stronger. Mo et al. (2021) investigated 2,174 lower secondary teachers from 139 schools in Finland using TALIS 2018 data and similarly reported a significant association between class demographic composition, as measured via the proportion of students from a different language background, migration background and refugees, and the dimension of teacher self-efficacy in multicultural classrooms ($\beta = 0.34$ at $p < 0.001$).

Choi and Lee (2020) investigated 1,871 teachers from 159 schools in the USA and also found higher proportions of second language learners relate positively to teacher self-efficacy $\beta = 0.156$ to $\beta = 0.279$, $\beta = 0.226$, $p < 0.005$, with the strongest effect found for proportions between 31 and 50%. These results were recently replicated by Choi (2023), but the relationship was found to be even stronger ($\beta = 0.49$, $p < 0.001$) when utilizing multilevel structural equation modeling as



the form of analysis. When a much larger sample of 47 countries was considered by [Choi and Mao \(2021\)](#), the relationship between proportions of second language learners and teacher self-efficacy in multicultural classrooms was still statistically significant, though much lower in strength ($\beta = 0.082, p < 0.05$). Assessing the relationship between CLD and teacher self-efficacy at the individual level produces similar results. [Geerlings et al. \(2018\)](#) found teachers reported lower self-efficacy in teaching ethnically diverse students, and this difference was strongest in classrooms of low ethnic diversity. Contrary to the above findings, studies including associations between school average cultural and linguistic diversity and school average teacher self-efficacy reported non-significant relations ([Collie et al., 2020](#); [Gutentag et al., 2018](#)).

Job resources in relation to teacher self-efficacy

In addressing our second research question, we found teacher sense of autonomy, engagement in professional learning communities, presence of a feedback network, and schools' approach to multilingualism and implementation of multicultural practices related positively to both teacher self-efficacy in teaching in multicultural classrooms ([Choi and Mao, 2021](#); [Choi, 2023](#); [Mo et al., 2021](#)), and immigration related self-efficacy ([Gutentag et al., 2018](#)). [Haworth et al.'s \(2015\)](#) qualitative investigation into the approach to cultural and linguistic diversity in high versus low socioeconomic schools similarly found that a whole school approach to cultural and linguistic diversity, characterized by a shared pedagogical vision across the school to quality teaching for diverse students, related positively to teacher's individual and collective self-efficacy in teaching English language learners within the low SES school context. [Choi \(2023\)](#) similarly revealed an indirect relation between distributed leadership and teacher self-efficacy in multicultural classrooms via feedback networks in which teachers receive feedback on their teaching from multiple sources,

including colleagues, external experts, principals, and other school members.

Additionally, the studies also revealed that participation in professional development related positively to teacher self-efficacy in teaching in multicultural classrooms ([Choi and Lee, 2020](#); [Choi and Mao, 2021](#)), teacher self-efficacy in teaching mathematics within CLD contexts ([Flores et al., 2015](#); [DePiper et al., 2021](#)), and teacher self-efficacy in implementing intercultural learning ([Sorge et al., 2023](#)). More specifically, the studies demonstrated that teachers report higher levels of self-efficacy when professional development takes place within a multicultural setting ([Choi and Lee, 2020](#); [Choi and Mao, 2021](#)) or includes an explicit focus on supporting teachers in their implementation of culturally responsive pedagogy ([Flores et al., 2015](#); [DePiper et al., 2021](#); [Sorge et al., 2023](#)).

Personal characteristics and teacher self-efficacy

In contrast to the positive relationship between various job resources and teacher self-efficacy, the relationship between personal characteristics and teacher self-efficacy varied more widely across studies. For example, multiple studies reported finding a non-significant relationship between teachers' years of experience and their self-efficacy in multicultural classrooms, immigration related self-efficacy, or preparedness self-efficacy for teaching emergent bilinguals ([Choi, 2023](#); [Choi and Mao, 2021](#); [Choi and Lee, 2020](#); [Gutentag et al., 2018](#); [Mo et al., 2021](#)). However, these findings were not conclusive across studies, contexts, and domains of self-efficacy. While [Choi and Lee \(2020\)](#) reported a non-significant finding between experience and teacher self-efficacy in multicultural classrooms for the US, they did find a positive relationship between experience and self-efficacy in multicultural classrooms for teachers in South Korea. Moreover, [Toropova et al. \(2019\)](#) reported a positive relationship between teachers' experience and teacher self-efficacy in mathematics, whereas [Collie et al.](#)

(2020) reported a negative relationship between teachers' experience and self-efficacy in teaching science. Collie et al. (2020) also found teacher adaptability associated positively with teacher self-efficacy in teaching science, while Gutentag et al. (2018) revealed views of diversity as an asset associated with teachers' immigration related self-efficacy.

Teacher self-efficacy in relation to work strain, work engagement, and job performance

Teacher self-efficacy related positively to work engagement, negatively to teacher stress, and positively to teaching quality across studies (Gutentag et al., 2018; Romijn et al., 2020; Toropova et al., 2019; Choi and Lee, 2020; Aguirre-Muñoz et al., 2023). Specifically, in their qualitative investigation of English Language Immersion teachers, Aguirre-Muñoz et al. (2023) found that teacher self-efficacy related positively to teacher work engagement as evident through their advocacy role for their students and persistence in the face of curriculum changes. Furthermore, while the teachers identified administrative requirements, students' need for differentiation, and close collaboration as being unique job demands of CLD classrooms, high self-efficacy appeared to function as a buffer against burnout and boosted teacher work engagement. Gutentag et al. (2018) similarly reported a negative correlation between teachers' school average immigration-related self-efficacy and school average diversity-related burnout ($r = -0.41, p < 0.01$).

Choi and Lee (2020) found teacher self-efficacy in multicultural classrooms related positively to teachers' reported perception of school climate in both South Korea ($\beta = 0.394, p < 0.001$) and the USA ($\beta = 0.077, p < 0.001$). On the contrary, Kim et al. (2023) found that an increase in teacher self-efficacy was associated with teachers perceiving students to have a more negative school experience. Interestingly, Kim et al. (2023) also found that teacher self-efficacy was associated positively with teachers' beliefs about minority parents' efficacy and that these beliefs mediated a relationship between teacher self-efficacy and expectations of minority students. More specifically, results showed that when teachers had high self-efficacy and strong beliefs about minority parents' efficacy, teachers reported higher expectations of minority children's school success. The percentage of minority children present in the classroom also associated positively with teachers' high expectations of minority children's school success. Alrawashdeh and Kunt (2022) also found that teacher self-efficacy was associated positively with teachers' awareness of students' psychological needs and linguistic challenges.

Toropova et al. (2019) also found teacher self-efficacy in mathematics relates positively to students' perception of instructional quality ($\beta = 0.23, p < 0.05$). The benefits of teacher self-efficacy were also evidenced in teachers' instruction by Romijn et al. (2020) who found a positive relationship between teacher diversity-related self-efficacy and teachers' use of intercultural practices ($\beta = 0.38, p < 0.001$). Sorge et al. (2023) also found that teachers' self-reported intercultural teaching practices were influenced by their self-efficacy ($\beta = 0.39, p < 0.001$). Moreover, Gülbahar et al. (2022) found teacher self-efficacy for classroom diversity associates positively with teachers' teamwork attitude and work engagement.

Toropova et al. (2019) and Collie et al. (2020) were the only two studies to investigate teacher self-efficacy in relation to student outcomes. Although, Lopez and Santibanez (2018) examined both teacher preparedness self-efficacy in instructional methods and

student achievement over time, they did not directly analyze the relationship between these variables. Toropova et al. (2019) reported non-significant relations between teacher self-efficacy in mathematics and student achievement in mathematics. In contrast, Collie et al. (2020), using 2015 PISA data from 2,189 schools in eight OECD countries, reported a positive, though weak, association between school-average teacher self-efficacy in teaching and school-average student self-efficacy ($\beta = 0.08, p = 0.01$).

Discussion

Building upon the prior reviews of Klassen et al. (2011) and Zee and Koomen (2016), the purpose of the present review was to investigate how cultural and linguistic diversity, job resources and personal characteristics associate with teacher self-efficacy in CLD classrooms. The review also aimed to examine how teacher self-efficacy relates to teacher work outcomes and job performance in CLD contexts. We applied the JD-R model as the theoretical basis of our analysis (Bakker and Demerouti, 2007). In the following, we will present a discussion of the abovementioned findings in light of previous research and the relations theorized by JD-R theory.

Cultural and linguistic diversity and teacher self-efficacy

Findings across studies suggest that CLD associates positively with teacher self-efficacy. In explaining these findings, mastery experience was the most cited mechanism across studies. For example, Romijn et al. (2020) suggest that increases in the cultural and linguistic diversity of the classroom result in a greater saliency of CLD learners' needs. Thus, in more culturally and linguistically diverse contexts, teachers are more frequently confronted with the need to support CLD learners. Subsequently, when teachers perceive to have successfully supported their CLD learners, they gain self-efficacy within this domain. This explanation is in line with Bandura's (1997) theorized sources of self-efficacy which identifies mastery experience as the most potent source of self-efficacy for an individual. Moreover, the specific domain of 'self-efficacy in teaching in multicultural classrooms' appears to be a newer addition to the self-efficacy literature, as it was not previously identified as a common domain in Klassen et al.'s (2011) review.

It is noteworthy that the mastery experience associated with self-efficacy in teaching within multicultural schools seems to be linked to the depth of a teacher's experience with cultural and linguistic diversity, rather than solely to their years of experience. That is, experience itself, measured as years of experience in teaching, was not found to be predictive of teacher self-efficacy in teaching in multicultural classrooms (Choi, 2023; Choi and Lee, 2020; Choi and Mao, 2021; Gutentag et al., 2018; Mo et al., 2021). Rather, only the density of cultural and linguistic diversity within a teacher's school context was positively associated with their self-efficacy in teaching multicultural classrooms. In Min et al.'s (2022) investigation of factors influencing teacher agency toward culturally responsive teaching, teachers similarly identified the density of cultural and linguistic diversity within their classrooms as a significant catalyst in their use of culturally responsive practices. The finding that cultural and linguistic diversity relates positively to teacher self-efficacy is important as it highlights that depth

of experience with cultural and linguistic diversity is an important component of teachers gaining self-efficacy in CLD contexts.

These findings also raise concerns regarding teacher self-efficacy in schools where cultural and linguistic diversity is present but in low density. In contrast to high self-efficacy, low self-efficacy is theorized to exacerbate the relationship between high job demands and stress, thereby increasing the likelihood of outcomes such as burnout and subsequently leading to poorer teaching quality (Betoret, 2009; Bakker and Demerouti, 2017). In line with these relations, Tatar and Horenczyk (2003) found that teacher diversity-related burnout appeared to be higher in schools with relatively low cultural heterogeneity as compared to schools with relatively high degrees of heterogeneity. Furthermore, Geerlings et al. (2018) found that teachers experienced lower self-efficacy in teaching learners of immigrant backgrounds in comparison to those with native backgrounds and that this relationship was strongest in classrooms with lower levels of diversity. These findings suggest teachers may feel least confident in working with CLD learners in more homogeneous contexts. As a result, CLD students may be experiencing the lowest levels of teaching quality in contexts low in cultural and linguistic diversity.

Job resources and teacher self-efficacy

The job resources that appear to associate positively with teacher self-efficacy in CLD schools can be categorized into one of two categories, universal job resources and job resources unique to CLD schools. The first category of universal job resources includes teachers' sense of autonomy, engagement in professional learning communities, and the presence of a feedback network (Choi and Mao, 2021; Choi, 2023; Mo et al., 2021; Gutentag et al., 2018). We refer to these job resources as universal, as they have previously been shown to relate positively to teacher self-efficacy, even in schools where cultural and linguistic diversity composition was not reported (Perera et al., 2019; Skaalvik and Skaalvik, 2010). Yet, the universality of these job resources does not diminish their relevance to CLD contexts. Culturally responsive teaching, as previously mentioned, entails a high degree of adaptation of content and instruction in order to reflect and incorporate the cultural and linguistic diversity of students (Gay, 2002; Gay, 2015). Thus, culturally responsive teaching inherently requires teachers to feel as though they have a high level of autonomy in their classroom instruction (Min et al., 2022). A high level of autonomy empowers teachers with a sense of authority to make decisions about what is best for their own classrooms. In feeling this empowerment and making such decisions, teachers likely experience positive results which in turn contribute to higher levels of self-efficacy as theorized by Bandura's (1977) notion of triadic reciprocity.

Professional learning communities, feedback networks and professional development similarly serve as avenues through which teachers can experience one or a combination of the sources that Bandura (1977) identifies as contributing to self-efficacy. These include mastery experience, verbal persuasion, positive emotions, and/or vicarious experiences (Bandura, 1977). Interestingly, Choi and Lee (2020) and Choi and Mao (2021) reported professional development to be a greater predictor of self-efficacy in teaching in multicultural classrooms than either level of education or years of experience. These findings support the results of previous studies which also reported similar findings (Tschannen-Moran and Johnson,

2011). Furthermore, that professional development influences self-efficacy provides evidence for the JD-R model's proposition that job resources predict personal resources (Xanthopoulou et al., 2009).

The second category of job resources—job resources unique to CLD schools, also create conditions that foster self-efficacy. Across studies, these factors included schools' pluralistic approach to CLD, the implementation of multicultural practices, and a vision of multilingualism. Brown and Medway (2007) similarly demonstrated that through a school climate that appreciates multilingualism, encourages the use of culturally responsive pedagogies, fosters collaboration and feedback from colleagues, and receives support from the administration, teachers can overcome their perceived ill-preparedness to teach in CLD classrooms. In line with self-efficacy theory, these findings further emphasize that teacher self-efficacy is best supported through exposure to one, or a combination, of the sources of self-efficacy (Bandura, 1997). Recent research by Celeste et al. (2019) further documented the significance of a school's approach to CLD in finding that students had higher levels of belonging and lower achievement gaps in schools that adopted an approach where diversity was valued rather than ignored. Thus, school climate holds important implications for both teacher self-efficacy, as well as student outcomes.

Personal characteristics and teacher self-efficacy

Our review also revealed that personal characteristics, in particular, teachers' attitudes toward diversity and views of diversity as an asset, are important predictors of teacher self-efficacy in multicultural contexts. Previous studies have also demonstrated the significance of teachers' beliefs on classroom practices (Gay, 2014). Specifically, teachers' beliefs have been linked to an avoidance of enacting culturally responsive pedagogies (Ullucci, 2007; Gay, 2014). Thus, content knowledge of culturally responsive pedagogies, and even experience, may not be sufficient to ensure that teachers enact these practices. Rather, teachers' attitudes and beliefs toward culturally and responsive pedagogies must also be aligned (Gay, 2015). Dubbeld et al. (2019) documented the significance of alignment between a school's approach to diversity and teachers' beliefs, finding that teachers with the lowest degree of burnout were teachers who personally identified as pluralistic and who also described their school policy as pluralistic. Conversely, teachers experiencing the highest levels of burnout were those who identified their schools as having a pluralistic policy, but who themselves held assimilationist attitudes (Dubbeld et al., 2019). While the JD-R model has previously acknowledged the role of personal characteristics via personality to personal resources/job resources and job performance (Bakker et al., 2010), our findings suggest the role of attitudes/beliefs in a profession such as teaching, should be discussed more prominently for their relationship to practice.

Teacher self-efficacy in relation to work outcomes, and job performance

Our third research question aimed to assess how teacher self-efficacy related to teacher engagement, work outcomes, and job performance in CLD classrooms. We found teacher self-efficacy related

positively to teacher engagement and negatively to teacher burnout (Aguirre-Muñoz et al., 2023; Gutentag et al., 2018). These findings align with the relations theorized in the JD-R model (Bakker, 2011; Bakker and Demerouti, 2017) and corroborate earlier studies reporting low self-efficacy associates with higher stress among teachers (Van Dick and Wagner, 2010; Brouwers and Tomic, 2000; Friedman, 2003).

The results also revealed a direct relationship between teacher self-efficacy and their use of intercultural practices (Romijn et al., 2020; Sorge et al., 2023). This finding is important given that culturally responsive pedagogies, including those which promote translanguaging, have been shown to improve CLD students' language development (Bosma et al., 2023), as well as their academic and socioemotional outcomes within CLD contexts (Aronson and Laughter, 2016). Moreover, that teacher self-efficacy relates to teachers' use of intercultural practices suggests that teachers low in self-efficacy, specifically as it relate to teaching in multicultural classrooms, may be less likely to implement culturally responsive pedagogies. This may be especially true for teachers belonging to the majority's cultural and linguistic background that have little prior experience in CLD contexts and who thus lack the cultural competence for enacting culturally responsive teaching (Min et al., 2022). It has been well-documented that in such situations, teachers are more likely to avoid addressing diversity in their classrooms altogether and instead operate from a monolingual and monocultural perspective (Hagenaars et al., 2023; Gogolin, 2002). This is concerning from an equity perspective, given that cultural and linguistic diversity is a reality in today's classrooms, and CLD learners are at a marginalized disadvantage in schooling (Schnepf, 2007; Cerna et al., 2021). Thus, fostering teacher self-efficacy for the purpose of increasing the enactment of culturally and responsive pedagogies appears crucial.

Studies investigating teacher self-efficacy in relation to student outcomes in CLD classrooms appeared scarce across the included articles. In their earlier review of 165 articles, Zee and Koomen (2016) similarly reported investigations of teacher self-efficacy to student achievement to be the most limited with only 22 of 165 studies addressing this relation. It therefore appears that the relation between teacher self-efficacy and classroom outcomes, both in general terms and within the context of CLD classrooms, is at present understudied.

Interestingly, while five studies in the present review linked teacher self-efficacy to at least one of the outcome areas of interest, none of the included studies attempted to go on to link teacher self-efficacy indirectly to student achievement. For example, while Gutentag et al. (2018) investigated associations between teacher self-efficacy and teacher burnout, the relations of teacher burnout as a potential mediator between teacher self-efficacy in multicultural classrooms and student achievement was not considered. Similarly, Toropova et al. (2019) investigated teacher self-efficacy in relation to students' perceptions of instructional quality but did not go on to relate instructional quality to student achievement. The lack of research into outcomes may stem from the fact that previous research has demonstrated insignificant relations between teacher self-efficacy and student achievement (Klassen et al., 2011). However, given the significance of teachers' beliefs to their actions in the classroom (Hattie, 2009), it is more probable that an indirect, rather than direct, relationship is taking place between teacher self-efficacy and student achievement (Toropova et al., 2019).

Relations beyond the JD-R model

In addition to the expected findings in accordance with the JD-R model, our review also revealed significant relationships between teacher self-efficacy and their awareness of CLD learners' psychological and linguistic needs (Alrawashdeh and Kunt, 2022). That higher self-efficacy associated with a greater awareness of the needs of CLD learners is likely a reflection of teachers' pedagogical content knowledge which has contributed to their self-efficacy (Shulman, 1986). We also found that teachers higher in self-efficacy had higher expectations of CLD learners school success (Kim et al., 2023). This is an important finding given that previous research has found teachers' lower expectations of CLD learners contribute to, and exacerbate, the achievement gap between CLD learners and their native peers (Van den Bergh et al., 2010). Thus, teacher self-efficacy appears to not only play a significant role in teachers' enactment of culturally responsive pedagogies, but teacher self-efficacy may also contribute to teaching practices via teachers' awareness of learners' needs and their expectations of learners.

We also found that teacher self-efficacy associated positively with teachers' beliefs toward organizational aspects of the school, such as their attitudes toward teamwork and perception of school climate (Gülbahar et al., 2022; Choi and Lee, 2020). This finding is likely explained by the reciprocity between job resources and teacher self-efficacy as described earlier. That is, CLD schools that have feedback networks and learning communities in place to support teachers, foster higher levels of self-efficacy, which in turn relate to teachers holding more favorable perceptions of the school climate and attitudes toward teamwork.

Threats to validity in operationalizing cultural and linguistic diversity

While the included studies provide insight into the significance of teacher self-efficacy within CLD contexts, variability in their operationalization of constructs, procedures, and samples prevent them from being directly compared and synthesized. Moreover, the variation within this small sample of 19 studies, raises concern regarding the validity and reliability of the ways in which cultural and linguistic diversity is operationalized and measured across the literature. The tendency for studies to rely on students' use of the majority language at home, categorizations of native or immigrant, and/or inclusion of low socioeconomic native students makes it difficult to disentangle the heterogeneity inherent to CLD classrooms (Budescu and Budescu, 2012).

Moreover, the reliance on teacher/principal reports for measuring school cultural and linguistic diversity is particularly concerning given several issues observed across studies. For example, Geerlings et al. (2018) discovered that teachers had inaccurately overreported eight students in their classroom as ethnically Dutch. This inaccuracy was revealed only after teacher responses were triangulated with student reports, which showed that the students had immigrant parents of Western origins. Teachers' inaccuracy in reporting on the composition of their own classroom brings into question the reliability of asking teachers to report diversity estimates for the entire school, as was done in other studies. Moreover, principal reports might also be questioned for their reliability,

especially given that, [Collie et al.'s \(2020\)](#) reported 27% missing values for these responses. This missingness suggests either an inability, unwillingness or even disregard by principals to answer such questions.

The methodological rigor of studies raises validity concerns. To better capture the complex relationships between constructs, future research should employ rigorous methods like structural equation modeling (SEM) and multilevel modeling. These approaches account for the nested structure of educational data, analyze latent variables at the appropriate level, reduce measurement errors and avoid overestimation of effects ([Bollen, 1989](#); [Hox et al., 2018](#); [Kline, 2016](#)). However, only three studies—[Mo et al. \(2021\)](#), [Toropova et al. \(2019\)](#), and [Choi \(2023\)](#)—used multilevel SEM. The remaining quantitative studies used 2-level hierarchical multiple regression, path analyses, or single-level regression. Moreover, most studies were also cross-sectional, underscoring the need for more longitudinal research in self-efficacy. Thus, there remains a need for studies to improve methodological rigor to capture the more complex relationships of teacher self-efficacy in classrooms.

Limitations

There are three important limitations of the present review. Firstly, relevant studies may have been overlooked and not included. This may be due to the use of a limited number of databases, limitations inherent to the search string, and/or the constraint of including only English-language, peer-reviewed articles. Additionally, restricting the review to articles published from 2014 onwards limited the number of studies included. However, as our aim was to understand CLD classrooms at present and to provide an overview of articles not covered in previous reviews, we believe our timeframe is justified. Moreover, investigations into CLD classrooms and teacher self-efficacy appears to be in its early stages, with more than a third of the studies emerging in the last 2 years. Notably, 17 out of the 19 included studies were published between 2018 and September 2023, highlighting the recent focus on this topic.

A second limitation is the use of thematic synthesis, which has a limited ability to account for the quality assessment of the studies, potentially affecting the reliability of the synthesized findings. Additionally, this, combined with a small sample of studies, restricts the generalizability of the results. Although the included studies represent various dimensions, measurements, and operationalizations of both cultural and linguistic diversity and teacher self-efficacy, this variation limited any meta-synthesis of the quantitative studies. The lack of qualitative studies also prevented triangulation of findings.

Furthermore, comparisons between studies were constrained by their respective contexts. Most of the studies focused on lower secondary levels, leaving primary classrooms underrepresented. Additionally, most analyses were conducted at the school level, limiting our understanding of these relations at the class and individual levels. Thus, while the results provide useful insights into the relations between cultural and linguistic diversity and teacher self-efficacy at the school level, additional research at the class and individual levels is needed to substantiate the findings presented here.

Thirdly, this review is limited by the cross-sectional nature of most included studies, preventing any inference of causal relationships between these variables. Consequently, rather than generating findings

that can be generalized to inform practice and policy-making, the present review highlights important areas for future research.

Future research

This review identifies important areas for future research. Firstly, future studies should continue to investigate the role of teacher self-efficacy in relation to work engagement, work strain and job performance in CLD contexts to corroborate the findings presented here. Secondly, more studies are needed at the primary level to gain a better understanding of how elementary school teachers perceive their self-efficacy to teach CLD learners and how the class composition may influence their perceptions of self-efficacy. Thirdly, future studies should avoid treating CLD learners as a homogenous group, and where possible obtain information about students' cultural and linguistic backgrounds from students directly. Lastly, the field would benefit from more longitudinal studies, as well as greater utilization of multilevel SEM to capture the complexities of the relations between cultural and linguistic diversity, teacher self-efficacy, engagement, strain, and job performance more fully.

Implications for practice

The present study has several implications. First, it highlights the need for school administrators and teachers to be aware of the significance of teacher self-efficacy in relation to work engagement, work strain, and job performance. Professional development initiatives aimed at enhancing teacher self-efficacy in CLD classrooms should be implemented in areas teacher feel least efficacious. Secondly, the findings here show teacher self-efficacy is supported when in an inclusive school climate that values diversity, encourages learning communities and feedback networks. Finally, school administrators should support and grant teachers the autonomy to implement culturally responsive pedagogies.

Conclusion

To the best of our knowledge, the present systematic review is the first to synthesize the literature from 2014 to date on teacher self-efficacy within CLD schools. The present systematic review sought to investigate teacher self-efficacy within CLD classrooms to better understand its antecedents, and relation to engagement, strain, and job performance. Using JD-R theory as the underlying theoretical framework, our analysis revealed that teachers feel more self-efficacious in teaching within multicultural classrooms when schools/classrooms themselves are more diverse. Furthermore, there appear to be universal job resources, such as autonomy, feedback, learning communities, and professional development which relate positively to teacher self-efficacy in CLD schools. Moreover, schools' approach to multilingualism and implementation of multicultural practices were revealed to be important job resources unique to CLD schools which positively relate to teacher self-efficacy. In addition to making available the necessary job resources to foster teacher self-efficacy in CLD contexts, our study also revealed the importance of teachers' attitudes toward diversity and views of diversity as an asset as predictors of

teachers' self-efficacy in CLD contexts. Taken collectively, these results support Bandura's (1977) theory of self-efficacy and point to the significance of teachers' gaining experience with CLD learners in order to build their self-efficacy, and the importance of school level factors in relation to teacher self-efficacy. Furthermore, teachers use of culturally responsive pedagogies appears contingent on their self-efficacy.

In addition to our main findings, the present review uncovered significant variations in the ways in which cultural and linguistic diversity is being operationalized in the literature. It is our position that information pertaining to the cultural and linguistic diversity of learners should be sought directly from students themselves and that researchers should use triangulation of sources where possible. We have also raised concerns regarding the reliability of teacher and principal estimates at the school level and criticized single level investigations at the school level. We call on the field to make greater use of multilevel SEM models which can account for the direct and indirect complexities of relations raised here and which are able to account for the nested structure of educational data. Lastly, we argue for a more precise disentanglement of SES categorizations between groups of native learners and learners of immigrant backgrounds. As cultural and linguistic diversity is inherent in today's classrooms, it is crucial to continue developing our understanding of how teacher self-efficacy in CLD classrooms relates to teacher work engagement, work strain, and enactment of culturally responsive teaching practices.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

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