

# *Quality content teaching for multilingual students: an international examination of excellence in instructional practices in four countries*

Article

Accepted Version

Creative Commons: Attribution-Noncommercial-No Derivative Works 4.0

Mitchell Viesca, K., Teemant, A., Alisaari, J., Enser-Kananen, J., Flynn, N. ORCID: <https://orcid.org/0000-0002-3710-9910>, Hammer, S., Perumal, R. and Routarinne, S. (2022) Quality content teaching for multilingual students: an international examination of excellence in instructional practices in four countries. *Teaching and Teacher Education*, 113. 103649. ISSN 0742-051X doi: 10.1016/j.tate.2022.103649 Available at <https://centaur.reading.ac.uk/101494/>

It is advisable to refer to the publisher's version if you intend to cite from the work. See [Guidance on citing](#).

Published version at: <https://www.sciencedirect.com/science/article/pii/S0742051X22000208?via%3Dihub>

To link to this article DOI: <http://dx.doi.org/10.1016/j.tate.2022.103649>

Publisher: Elsevier

All outputs in CentAUR are protected by Intellectual Property Rights law, including copyright law. Copyright and IPR is retained by the creators or other copyright holders. Terms and conditions for use of this material are defined in

the [End User Agreement](#).

[www.reading.ac.uk/centaur](http://www.reading.ac.uk/centaur)

## **CentAUR**

Central Archive at the University of Reading

Reading's research outputs online

## **Abstract**

Observations of Pedagogical Excellence of Teaching Across Nations (OPETAN) is a mixed methods observation study of 31 content teachers, most nominated for their excellence in teaching multilingual students in Germany, Finland, the US, and England. The study relied on an observation rubric that operationalizes seven Enduring Principles of Learning grounded in critical sociocultural theory and pedagogy. Findings revealed excellent teachers emphasize complex thinking, language use, and modeling. Teacher use of small groups, contextualization, and equity-focused practices were areas of potential growth. International research holds promise for understanding and improving K-12 content teaching and teacher education for teachers of multilingual learners.

*Key Words:* multilingual education, teacher practice, sociocultural theory, critical theory, observation research

## Introduction

Despite the differing sociopolitical, historical, cultural, and linguistic contexts of various nations (for instance, the nations in this study: Germany, Finland, the US, and England), a common challenge exists. Increasing numbers of students are attending school in a language of instruction that they are still learning (students we call “multilingual”), and the schools and teachers supporting them may have little preparation or support to advance multilingual student success (Alisaari et al., 2019; Becker-Mrotzek et al., 2012, Lucas, 2011; Murphy & Unthia, 2015; Wernicke et al., 2021).

In addition to this internationally shared problem, Faltis and Valdés (2016) argued that there is little empirical evidence to suggest how to best prepare general education teachers (e.g. grade level math and science content teachers<sup>1</sup>) of multilingual learners<sup>2</sup> (see also Takanishi & Le Menestrel, 2017). Despite the generally small field of existing research on effective practice in general education classrooms for multilingual students, there is a very promising line of research that has shown, over time and in multiple US contexts, evidence of producing strong academic outcomes for multilingual students in general education content classrooms (e.g., Doherty & Hilberg, 2007; Estrada, 2005; Tharp et al., 2000; Teemant, 2014; Teemant, 2015; Teemant & Hausman, 2013; Teemant et al., 2014). Organized around seven Enduring Principles of Learning<sup>3</sup>, this research has already produced a validated and reliable observation tool for the

---

<sup>1</sup> These teachers are referred to in varying ways across the national contexts of this study including primary school classroom teachers, secondary and upper-secondary school content/subject teachers, etc.

<sup>2</sup> Depending on context, these multilingual students may be referred to as “English Language Learners” or “German as a second language learners.” We use the term “multilingual” to refer to students to emphasize their existence as students who navigate two or more languages daily.

<sup>3</sup> Until recently, what we are calling the Enduring Principles for Learning have been known as the Standards for Effective Pedagogy. We are using the term Enduring Principles for Learning because we feel it more accurately represents the nature of the tools utilized in this study.

US context (Teemant et al., 2014). Some work with these principles has occurred outside of the US as well (Wyatt et al., 2012) indicating its suitability for our use in this study.

This study examines quality instructional practices, as operationalized by the Enduring Principles of Learning (Teemant et al., 2014), across four different nations: Germany, Finland, the US, and England. A mixed methods design was deployed drawing from complementary quantitative and qualitative data of teaching practices. In this study, a classroom observation rubric for the Enduring Principles of Learning was implemented to evaluate instructional quality among content teachers of multilingual learners. Concurrently, qualitative observation notes of teaching interactions were also collected in each classroom. This complementary data collection makes rubric scores visible as vignettes of teaching practices, strengthening understanding of quality content area teaching of multilingual learners across the four nations. Our research questions (RQ) were:

RQ1: What does quality instruction in linguistically diverse content classrooms in four different nations look like for multilingual learners?

RQ2: What similarities and differences in quality instruction exist in content classrooms for multilingual learners in four different nations?

### **Theoretical Framework**

This study of teacher pedagogy for multilingual learners rests at the conceptual intersection of theory and research in (a) language learning; (b) learning theory; and (c) critical social theory. In this section, the theoretical perspectives and pedagogical practices underpinning this study are described.

### **Theoretical Perspectives**

There are a variety of theoretical perspectives that suggest what content teachers of multilingual learners should know and be able to do. First, knowledgeable teachers of multilingual learners understand emergent language development as a complex, incremental, and nonlinear social and cognitive process (e.g., Ellis, 2015; Larsen-Freeman, 1991; Spolsky, 1989). Teachers need to create learning opportunities that expand student language proficiencies for a range of tasks and contexts. Second, teachers of multilingual learners should understand learning, and in particular, the important contributions of Vygotsky's (1978) sociocultural theory, which viewed language, thinking, and emotion as inseparable in the learning process (Smagorinsky, 2013). Sociocultural theory rests on four assumptions: knowledge is cultural understanding and competent participation in discourse communities; learning is a social process; teaching is assisting; and learning leads development through situated performance that is dynamic, episodic, and continuing (Teemant et al., 2004). For Vygotsky, learning is a language-based as well as culturally and historically situated process that is active on three levels: for the student, the teacher, and the interactional space between the teacher and student (Vygotsky, 1997). The work of Mercer (2019), Skidmore and Murakami (2016), and Wells (1999), for example, explore the pedagogical practices and challenges of implementing sociocultural theory in education as dialogic interactions between teacher and students, or students with students, in various ways of grouping and dialoging with students.

The third knowledge base for teaching multilingual students takes up critical social theory (e.g., Freire, 1994; Gottesman, 2016) to deepen understandings of how social, cultural, historical, political, racial, economic, and gender differences impact learning expectations, opportunities, and outcomes for multilingual learners as members of marginalized and minoritized groups. Scholars, such as Duncan-Andrade and Morrell (2008), Freire (1994),

Giroux (1988), Moll, Amanti, Neff and Gonzalez (1992), argue that teachers who connect school knowledge to students' lives and communities outside the classroom acknowledge and affirm students. More importantly, such teachers challenge, and prepare students themselves to challenge the societal forces that minoritize multilingual students and produce educational inequities (Alim et al., 2020). Taken together, critical sociocultural theoretical perspectives (Freire, 1994; Vygotsky, 1978) support teachers of multilingual students to simultaneously and productively focus on equity through language, learning, and learners in context.

### **Pedagogical Practices**

As pedagogical practice, this study operationalizes critical sociocultural theory as classroom practices using seven Enduring Principles of Learning originally called the “Standards for Effective Pedagogy” (Tharp, 2006; Tharp et al., 2000; Teemant et al., 2014). The seven pedagogical practices are: (1) *Joint Productive Activity (JPA)* where students and teachers co-construct learning products together; (2) *Language and Literacy Development (LLD)* where students are actively engaged in language and literacy practices; (3) *Contextualization (CTX)* where school learning is deliberately connected to students' lives outside of school; (4) *Challenging Activities (CA)* where students are provided performance expectations along with feedback and assistance to achieve those expectations; (5) *Instructional Conversation (IC)* where students and teachers engage in dialogic learning; (6) *Critical Stance (CS)* where instruction empowers students to transform inequities in and outside the classroom through democratic participation and civic engagement within one's sphere of influence; and (7) *Modeling (M)* where students are allowed to develop competence through observation before being required to perform. These principles of learning value collaboration, co-construction of knowledge, activation and development of background knowledge, sustained language and literacy use,

cognitively demanding activities, modeling, multiple perspectives and community engagement, equity, and dialogic interactions in various small group configurations. Each principle when enacted at its highest level is rich with teacher assistance and feedback.

The principles have been studied individually and as connected practices (e.g., Doherty & Hilberg, 2007; Teemant et al., 2013; Saunders, 1999; Saunders & Goldberg, 1999). In combination, use of the principles has been associated with statistically significant positive student academic achievement for monolingual speakers of English as well as for multilingual students learning English (in both content areas and English language development) (Teemant, 2014; Teemant et al., 2013; Doherty & Hilberg, 2007; Doherty et al., 2002). Further, Estrada (2005) and Estrada and Imhoff (1999) linked small group reading instruction guided by the principles to reading achievement. Critical Stance, in particular, is positively correlated to gains on multiple types of standardized language arts achievement tests by both monolingual and multilingual speakers of English. In fact, Critical Stance has been demonstrated to be a stronger predictor of achievement than level of higher order thinking (Teemant et al., 2013, 2014, 2021).

In summary, we operationalized critical sociocultural theoretical perspectives as pedagogy in this study through the Enduring Principles of Learning. We use a validated and reliable observation tool called the Standards Performance Continuum Plus or SPC Plus<sup>4</sup> (Doherty et al., 2002; Tharp, 2006; Teemant et al., 2014). We argue that these Enduring Principles, individually and collectively, operationalize teachers' potential and simultaneous focus on equity, language, learning, and learners in situated contexts. With this rationale, we collected data on teachers with a reputation as quality teachers of multilingual students using the SPC Plus as our data collection protocol in four nations.

---

<sup>4</sup> See Appendix A.



## **Four National Contexts**

Each nation in our study is grappling with the complexities of educating children who arrive at school needing to learn the language of instruction. The context varies, as described below, from nation to nation in terms of histories, policies, and approaches to educating multilingual learners and their teachers, although the need for differentiated and supportive pedagogy for multilingual learners is a consistent theme in every national context.

### **Germany**

In 2017, 19.3 million or 23.6% of inhabitants of Germany had a migrant background (Statistisches Bundesamt [German Federal Statistical Office], 2018). This means that a person has immigrated to Germany since 1949, was born a foreigner in Germany, or was born in Germany with at least one parent who immigrated to Germany or was born a foreigner in Germany (Statistisches Bundesamt, 2018). In Lower Saxony, where we collected data for this study, 27.2% of its 8 million inhabitants under age 25 have a migrant background (Niedersächsischer Landtag, 2007).

Germany has a federal system with 16 states (Bundesländer) which are responsible for education. Therefore, teacher education policies as well as the policies and practices concerning how to teach multilingual learners can vary widely across Germany. Even though recommendations for preparing teachers for multilingual learners started in the 1970s (Baumann, 2017), it was only in 2009 that some federal states implemented mandatory modules for teacher preparation (e.g., in North Rhine-Westphalia, Berlin, and Hamburg). Since 2014 a national enactment regulates topics like language support, home language facilitation, and linguistically and culturally responsive teaching (Kultusministerium [Ministry of Education and the Arts], 2014). Hence, every university teacher education program offers varying amounts of courses and

content to support teachers in learning to work with multilingual students (Baumann, 2017; Berkel-Otto et al., 2021). For Lower Saxony, preparing teachers to work with multilingual learners is not expansively established in teacher education although a 1998 school law emphasizes the right of every student to be supported in learning German (Niedersächsisches Schulgesetz [School law of Lower Saxony], 1998).

## **Finland**

In 2016, Finland implemented a new core curriculum for basic and upper secondary education. One of its characteristics is that it responds strongly to the increase of linguistic diversity in schools. In Finland, the number of students with minoritized linguistic backgrounds grew significantly during the 1990s and has continued to grow exponentially each year. Finnish and Swedish are both national languages in Finland, and there are also some other languages (e.g., Sami, Romany, Karelian, Finnish Sign Language, etc.) that have various levels and forms of recognition and status. Currently, 7% of the population uses languages other than Finnish and Swedish (Official Statistics of Finland (OSF), 2019.) In basic and upper secondary, the number of multilingual learners ranges from 0 to 70 percent. In response to this increased diversity, the current curriculum reform introduced new perspectives, such as linguistically and culturally responsive teaching. For example, every teacher is to take into account the challenges that academic language in different school subjects poses for learners. It also states that all students should be able to use their whole linguistic repertoire as a resource for learning (National Agency for Education, 2014, 2015).

## **United States**

Dating back to the 1970s, the US had landmark civil rights cases advance access to bilingual education and more equitable educational practices (e.g., Lau v. Nichols, 1974).

However, until the passage of No Child Left Behind (NCLB) in 2001, most multilingual students were taught in substantially segregated spaces with other multilingual learners. With the passage of NCLB, multilingual students were expected to show high levels of English proficiency on standardized tests very quickly. This motivated many schools and districts to change their programs of support for multilingual students and increased the number of multilingual learners being taught in general education classrooms. However, the under-preparation of general education content teachers to work with multilingual learners has long been documented (e.g. Lucas & Grinberg, 2008; Deng et al., 2020) despite efforts to ameliorate concerns (Deng et al., 2020; Freeman & Freeman, 2014). Overall, multilingual students who are labeled “English learners” and thus are at the early stages of developing English proficiency make up nearly 10% of the total student population in public schools (~4.9 million students total). Different US states have different laws and rules around teacher preparation and licensure requirements to work with multilingual students. Different states also have different populations of multilingual students in terms of size, race, language, etc.

## **England**

In England, the number of students in school whose home language is not English has increased significantly in recent years; this is because of both planned migration from within the EU, for example, and forced migration from other parts of the world. Currently more than 20% of children in primary schools (ages 4 – 11) and over 16% of pupils in secondary schools (between 11 and 18) speak a language other than English at home (Department for Education and Skills (DfES), 2021). It is important to note that England’s language-landscape is super-diverse (Vertovec, 2007) with a long history of admitting multilingual children into classrooms. In London alone, more than 360 languages are spoken.

England has a national curriculum that is mandatory in most state-run schools. Teachers observed for this study were teaching using the National Curriculum for England (DfES, 2013). This is notable for the extra level of detail devoted to the teaching of English as compared to other subjects, and the absence of any guidance, or mandatory expectations, specific to the teaching of multilingual learners. The reading and writing programs of study contain very specific learning objectives for the teaching of phonics, spelling, grammar, and punctuation. These are assessed by high-stakes national testing at ages 6, 7, and 11 years, and these tests are designed for English dominant speakers. This creates some tensions for teachers of multilingual learners who are likely to under-attain unless they have been at school since the normal school starting age of five (DfES, 2019). Indeed, teachers report their under-preparation for teaching multilingual learners and cite lack of training as causal at least in part for student under attainment (Flynn & Curdt-Christiansen, 2018). That said, research shows us that, despite limited available funding for training teachers of multilingual learners (Strand et al., 2015), there are teachers who are linguistically responsive and who make a difference with their language-rich pedagogy (Flynn, 2019).

### **Methodology**

This descriptive one-phase mixed methods study (Creswell & Plano Clark, 2007) undertook observations of 31 teachers in four different nations—Finland, Germany, the US, and England—to examine quality of instruction for multilingual learners. Quantitative and qualitative data were gathered simultaneously and examined to understand the similarities and differences across nations for quality teaching of multilingual students. The complementary data sets allow for quantitative observation data from a rubric to be expanded and validated with qualitative data in interpretation to reveal patterns and practices.

## **Participants**

Table 1 provides descriptive information regarding our study participants by country, student ages, content area, and percentage of multilingual students in the classroom. Teacher participants were observed teaching in multiple content areas (language arts, social studies/history, mathematics, and physical education) and grade levels for children between the ages of 5-15. In some school settings, just one teacher was observed. In other settings, several teachers were observed. Multilingual students represented 5% to 100% of the students in observed classes.

Teachers were considered for participation if they taught in a school with a student population of at least 10% multilingual learners and were general education content teachers. Most of the teachers observed (84%) were recommended by school leaders, peers, or teacher educators working in partnership with their schools as having a reputation for strong practice supporting multilingual students. While we acknowledge that “recommendations” of quality or excellence across different contexts will vary considerably, we attempted to control for this to some extent by the rigor involved in preparing the research team to undertake classroom observations (see below).

INSERT TABLE 1 ABOUT HERE

## **Research Team Preparation**

As a large team of international researchers, the local host researcher for each national site ensured all Institutional Review Board (IRB) and ethics procedures were followed for data collection and recruitment of participants. Members of our team came from each of the four nations in the study. Most team members observed in their own nation as well as at least one other nation. The entire multilingual and multicultural team participated in extensive online, as

well as in-person, preparation to ensure consistency in scoring practices using the observation protocol (see Appendix A). The lead author observed in all four nations across all 31 observations, ensuring inter-rater reliability and consistency with our data collection and interpretation. No observation ever had fewer than two team members present with at least one of those members a local researcher grounded in the cultural, linguistic, and sociopolitical context. After each observation, time was taken to debrief and collectively agree upon the observation scores.

## **Data Sources**

Data collection included observation scores using the SPC Plus and extensive fieldnotes. The fieldnotes ensured local language, culture, and educational practices would be taken into account. The SPC Plus captured implementation of the Seven Enduring Principles of Learning. (See Appendix A). The continuum is expressed on a 5-point scale, where 0 = Not Observed, 1 = Emerging, 2 = Developing, 3 = Enacting (the target for individual principles), and 4 = Integrating (indicating simultaneous use of 3 or more principles at the Enacting level in a single activity). The continuum captures behavioristic/teacher-centered (0 to 1), cognitivist (2), and critical sociocultural (3 to 4) teaching. At the integrating level, the rubric describes instruction that is rich with collaboration, language and literacy use, contextualization, modeling, higher order thinking, and teacher-student and student-student dialogue as well as taking action to equitably initiate change from within students' sphere of influence. At the highest integrating level, students receive meaningful assistance and feedback from more knowledgeable others as understandings are co-constructed products.

There is an important rule for scoring called the 3 x 3 rule. This rule states that if at least three principles of learning are rated at the enacting level (3) for an activity, then each enacting

score for that activity is raised to the integrating level (4). Each activity during instruction is scored individually, and then the highest score for each principle across all of the activities during an observation were used to create an overall score for the lesson. In this study an “activity” was determined collectively by the observers in our immediate post observation debriefs. With a total score of 28 points possible, four value ranges determine fidelity of implementation: (a) emerging < 7.50; (b) developing = 7.50 – 12.49; (c) enacting= 12.50 – 17.49; and (d) integrating= 17.50 – 28.00. Tests of the reliability and validity of the SPC Plus rubric are reported in Doherty et al. (2002) and Teemant, et al, (2014).

### **Data Analysis**

For this descriptive study, qualitative and quantitative data analyses were carried out to create pattern profiles and vignettes of teaching for each nation in which teachers were observed. For the SPC Plus data, scores for individual principles of learning were listed and the total score, means, and modes were calculated for each teacher observed by nation. Patterns of use for the seven Enduring Principles of Learning are highlighted to exemplify the trends observed in the scores. The qualitative fieldnotes from one site-specific observation were then used to create descriptive vignettes of teaching to capture the nature of instruction in the classrooms of general education teachers considered effective teachers for multilingual learners. Validity was established by drawing implications from both the qualitative and quantitative data (Creswell & Plano Clark, 2007).

### **Results**

Across our observations, we found important patterns to illustrate witnessed teaching among teachers identified for their quality in teaching multilingual learners. The following

describes and illustrates these patterns first by nation, then with analysis of the patterns we found looking across nations.

## **Germany**

We conducted five observations in German schools in Lower Saxony during August of 2017. We visited these schools during the second week of the school year. Because teachers were still setting up their routines and expectations with students, this did not turn out to be an optimal time to observe. Despite this limitation, we still witnessed and documented high quality pedagogical practices, most commonly around Joint Productive Activity and Challenging Activities. Table 2 presents the individual ratings and group means and modes for teachers observed in Germany.

INSERT TABLE 2 ABOUT HERE

**German Pattern.** Teachers were most consistently observed using two principles of learning at the developing level (2): Joint Productive Activity (JPA) and Challenging Activities (CA). For JPA, this means students were collaborating in each classroom. For Challenging Activities, both the mean and the mode were at the developing level (2 out of 4 possible). On the rubric, this means teachers designed and enacted “challenging activities that connect instructional elements to academic content or advance student understanding to more complex levels” (Appendix A). The combination of JPA and CA created conditions for authentic language use for multilingual students during collaboration and co-constructed content development with peers and teachers around cognitively challenging tasks. German teachers used the remaining principles of learning at the emerging or behavioristic level, being more teacher-centered during this early period of the school year. Nevertheless, the mean for total score puts these teachers at



the developing level (7.50-12.49) overall with their pairing of collaboration (JPA) with complex thinking (CA). The brief vignette below illustrates this pattern in practice.

**German Classroom Vignette: JPA and CA.** During a lesson on alphabetization, Teacher G-E and her second-grade students congregated at the back of the room on the floor around an opportunity to “fish.” Students used a fishing pole crafted by the teacher to fish out a sponge that had a word attached to it. Together the teacher and students talked about each word, particularly its meaning. Then the student who fished out the word would decide where it should be positioned against the other words fished out based on alphabetical order. Each time a student made a decision about where to place a word, the teacher asked the student to explain the decision. Sometimes through questions posed by the teacher, a student moved their word to a different positioning. Both the teacher and the students took the time necessary to think through, discuss, describe, and find confidence in their decisions.

At one point, a multilingual learner fished out a word that had the same first letter as a word that had already been fished. The student took a guess at where to put it, which was not correct. When the multilingual student explained her decision saying that her word went before the existing word because her word had more letters. The teacher complimented the student for her smart thinking and posed a question, “What would you do if the words had the same number of letters?” This got the students thinking and discussing. One student suggested that if the first letter is the same, it’s the second letter that matters. The teacher complimented this thinking and suggested that the class review the alphabet posted on the wall. After reviewing it, the class agreed that the new word should be moved. The multilingual student moved the word to the new location and read both of the words with the same first letter out-loud. The next student fished out a word that also had the same letter as an existing word in the list. He put the word in the

correct place in the list. The teacher asked him to explain why he did that. He explained that the second letter of his word comes before the second letter in the word that was already listed. The teacher asked the class to review the alphabet on the wall to see if he was right. They reviewed the alphabet and agreed with his decision.

This vignette illustrates the pattern of strong use of JPA at the developing level (2) and CA at the enacting level (3). The teacher and students worked together as a whole class around a shared understanding of alphabetical order (intangible JPA) while putting words in proper order (tangible JPA). In doing this, the teacher engaged students in using higher order thinking by putting words in order while providing a rationale for their thinking. In this way, the activity was cognitively challenging because the teacher set a clear performance standard (i.e., put words in alphabetical order), and provided students with feedback and assistance to help students meet the performance standard. In this vignette, we see the teacher encouraging authentic communication around a challenging topic while using targeted questioning and visual scaffolds to support higher order thinking. This combination of JPA and CA illustrates the possibilities for learning when authentic language use and collaborative conceptual development occur simultaneously.

## **Finland**

We conducted eight observations in two different Finnish cities during November 2017. Table 3 presents the individual ratings and group means and modes for teachers observed in Finland.

INSERT TABLE 3 ABOUT HERE

**Finnish Pattern.** Teachers were most consistently found implementing the principles of Challenging Activities (CA), Modeling (M), and Contextualization (CTX) at higher levels than the other principles of learning. For CA, five of the eight observations (62%) scored at the

“enacting” level (3). At this level, teachers had designed and enacted activities that required higher order thinking and set clear performance standards, provided assistance in the process of learning, and gave feedback that improved student performance. Modeling (M) was observed at the enacting level (3) in 37% (3 of 8) of our observations. This means the teacher provided “a model of a completed product that students then make, or models the behaviors, thinking processes, or procedures necessary for the task, and assists students during practice” (Appendix A). In another 37% of the observations (3 of 8), we saw enacting levels (3) of CTX , meaning the teacher intentionally integrated students’ prior knowledge or experience from home, school, or the community with teaching new academic concepts. On average, these Finnish teachers rated at the developing level (7.50-12.49) for total score although individual teachers were observed at all levels: integrating (1), enacting (3), developing (2), and emerging (2).

The strong representation of Challenging Activities in these Finnish classrooms aligns well with the central role of thinking skills and problem-solving as learning goals in the national curriculum (Virta & Yli-Panula, 2016; Kairavuori & Sintonen, 2016). Finnish students in comprehensive school receive overall high scores in problem solving according to a number of international learning assessments (Niemi, 2016). The aim is putting students to work on a task instead of a teacher explaining the solution. The mathematics curriculum emphasizes the importance of pupil’s own thinking and co-operative learning methods. In addition, efforts are made to develop mathematics education in the primary school that draws on multiplicative relations in students’ everyday surroundings (McMullen et al. 2019). In early grades. the manipulatives maybe be countable items from children’s living worlds that contextualize the challenges for the children. In other words, for mathematics, Finnish language arts, and Finnish as a second language pedagogy, Challenging Activities integrates the goals of developing

problem solving skills and support to multilingual learners through the use of modeling, (e.g., Rose & Martin, 2012; Shore & Rapatti, 2014; Tainio & Grünthal, 2016) and contextualization. Below is a brief vignette of early mathematics instruction that illustrates this pattern of teacher use of complex thinking, modeling, and contextualization at high levels in one activity.

**Finnish Classroom Vignette: CA, M and CTX.** During a math lesson, Teacher F-B in a second-grade classroom worked with her students to develop multiplicative reasoning. The teacher started the lesson explaining, “Today we are making strawberry pie!” She retrieved four plastic strawberries from her desk and carried them across the room for all the students to see. She repeated this three more times while explaining that she was making three total pies. When she finished carrying the sets of strawberries, she asked the students to talk about what she had done. She asked specific questions like, “How many strawberries do we have now?” and “How many times did I go to get more?” As they discussed her actions, she wrote, “ $4 + 4 + 4 = 12$ ” on the board. She then explained that there will be a party and asks for five volunteers to be party guests. The five volunteers went to the front of the room. Another student became the “host” and was given the responsibility of distributing cookies to each of the party guests. Each guest was served three (very real looking) plastic cookies, one at a time. When all of the guests had received their three cookies, the teacher asked the host, “How many times did you give out cookies?” and then asked the class to think about how many cookies they had. As they discuss, the teacher wrote “ $3 + 3 + 3 + 3 + 3 = 15$ ” on the board. The teacher commented as she wrote how it’s a long calculation. The teacher and the students engage in multiple variations of these activities, working together to count students’ fingers and legs as well as using images to count dogs’ legs, ladybugs, and birds. Students participated by providing body parts to count, illustrated the counting process with body motions, or followed along by counting felt chips on

their desks. Each task led to a formula on the board that illustrates the foundation of multiplicative reasoning and was contextualized to everyday items. Each iteration contained strong modeling by the teacher and provided for students to engage in challenging activities. Towards the end of the class, students had the opportunity to work independently to do similar activities in their textbooks (counting bunnies, teddy bears, etc.).

This vignette illustrates how the teacher co-constructed student understanding in a whole class setting, collaborating with students to develop understandings of multiplicative reasoning (intangible product), which was cognitively challenging, while using manipulative and equations to contextualize and model their talk. As a whole class activity, there was less opportunity for student language use or discussion for multilingual learners in the classroom. However, as a deeply contextualized lesson that was cognitively challenging and heavily modeled conceptually and linguistically, it exemplified an excellent content development opportunity for multilingual learners without being reliant on students' language knowledge.

## **United States**

We collected data in 10 classrooms in a large metropolitan area in the midwestern US in April 2018. Table 4 presents the individual ratings and group means and modes for teachers observed in the US.

INSERT TABLE 4 ABOUT HERE

**US Pattern.** Across the 10 observations, US teachers used Language and Literacy Development (LLD), Joint Productive Activity (JPA), and Challenging Activities (CA) in combination at higher levels than the other principles of learning. Language and Literacy Development was used by 70% of the teachers at the enacting (3) and integrating (4) levels—the highest levels. Achieving the integrating level means that a teacher is using at least three

principles of learning at the enacting level (3s) in a single activity, which allows the enacting principles to become integrating ratings (i.e., 4s). Some level of collaborative work (JPA) was observed in 90% of the classes, with 50% of the observations being rated at the developing level. This means students were most commonly working together independent of the teacher in small groups or with the teacher in a whole class setting developing shared conceptual understandings as a class. For 80% of the observations, teachers simultaneously used cognitively challenging tasks. For 40% of the observations, teachers reached the enacting level for promoting complex thinking by setting clear expectations for performance while offering feedback and assistance to students in the process of their learning. The total score mean for US teachers placed them at the enacting level (12.50 – 17.49) of the rubric.

The US emphasis on language and literacy development and challenging tasks is not surprising, given the federally required annual testing for reading and writing development for all students. A common practice in US literacy classrooms is “guided reading” where a teacher works with a small group of students at their literacy level to provide direct instruction. This practice can at times be JPA at the enacting level if the teacher engages collaboratively with students to explore ideas and concepts rather than just offers direct instruction. However, guided reading may not be JPA—it is dependent on the actual joint production that is taking place. Yet, the common use of teacher-led small groups (like in guided reading) also creates the context for more use of small group activities where students are seated and/or collaborate independent of the teacher. The vignette below illustrates this pattern of high language use (LLD) combined with collaborative (JPA) and challenging (CA) activity.

**US Classroom Vignette: LLD, JPA, and CA.** Teacher US – G taught a 5<sup>th</sup> grade class with 58% of the class multilingual. We observed the class during English Language Arts where

students were organized into groups of three and engaging in “book clubs.” The teacher held “Café” discussions with one group at a time. Café discussions focus on Comprehension, Accuracy, Fluency and Expanding vocabulary. As the teacher worked with one group at a time, her engagement with the students was almost entirely to pose questions. For instance, she asked one group, “What are some clues in that sentence that will help you know what tone to use?” She also asked after reading aloud a passage with that same group of students, “How can I go back now that I understand what the message is, how can I give it more emotion?” The teacher simultaneously elicited collaboration and language and literacy use by asking questions and providing feedback or assistance against expectations for success.

While the teacher was collaborating with one group, the other student groups were dispersed around the room working on their book clubs. Students in each book club had responsibilities to ensure the success of the book club. In fact, students either had already written lesson plans for their roles in the book club or were proactively writing them. Each group of students had selected their own text to read together and had divided up the responsibilities for a successful book club. Groups were in different phases with their book club, but all book clubs had a clear standard to work towards and received regular feedback and assistance from the teacher to meet that standard. During our observation every student in the class was reading, writing, or discussing their book club work with their peers and/or the teacher. The class was full of activity with each student and group of students working at their own pace but engaged and making progress towards a shared goal.

This vignette illustrates how the teacher expertly combined collaboration (JPA) to scaffold and support students to engage in high level language use (LLD) and thinking (CA). Her strategic collaboration with students allowed for multi-tasking activity around book club learning

goals as well as a rich diversity in process, product, and outcome for students. The class had developed a strong shared understanding of what a quality book club looked like and received regular and beneficial feedback and assistance from the teacher in reaching expectations. The clear performance expectations for the book club created the context and impetus for students to read, write, speak, and think together.

## **England**

We observed eight expert teachers' practices in London and the southeast of England in May 2018. Table 5 presents the individual ratings and group means and modes for teachers observed in England.

INSERT TABLE 5 ABOUT HERE

**English Pattern.** Teachers in England enacted Language and Literacy Development (LLD), Challenging Activities (CA) and Modeling (M) at the highest or integrating level (4 of 4 possible). They also implemented the remaining four principles at the developing level (2 or 4 possible) most often. The majority of classes observed were focused on English Language Arts, but, even in classes where the subject content was not English, the development of language and literacy was foregrounded in practice. This is reflective of a curriculum emphasis on the learning of English through various policy initiatives in the past twenty years (e.g., DfES, 2007; Primary National Strategy, 2006) and by high stakes testing in English (Anderson et al., 2016). Despite reservations about the singular emphasis on learning technical aspects of English, there are positive benefits for multilingual learners who are in the hands of skilled teachers. We noted: an emphasis on the explicit teaching of content vocabulary related to the learning objectives; activities that generated student language use; and activities where language use directly supported literacy development. In the highest rated classrooms, practice was dialogic and



student-led, resulting in sustained periods of student talk. In other cases, the stipulation in England's framework (Office for Standards in Education, Children's Services and Skills (OFSTED), 2019) to accommodate learners' needs to ensure progress was on display. For example, teachers differentiated phonics teaching for English proficiency with grouping strategies; used questioning and insisted on students providing rationales for their thinking in developing inference and deduction skills for reading comprehension; used wait time to encourage students to think about and expand their responses to texts; and used a range of media to model, scaffold, and make visual and tangible teacher expectations.

**English Classroom Vignette: LLD, CA & M.** Teacher E - B taught a class of 9-10-year-olds with 79% multilingual learners, in a school in East London located close to the River Thames. We observed one of a sequence of history lessons on Victorian London. The focus for this unit of work was that students would learn about the dilemma for the Prime Minister, Benjamin Disraeli, of tackling the stench (The Big Stink) of pollution from the River Thames. The teacher's intention was that students would enact his conversations with the engineer Joseph Bazalgette in preparation for producing a comic-strip representing their dialogue. As is common practice in English classrooms, this lesson was to the whole class and was delivered through a mix of teacher modelling and student tasks.

The teacher did very little "telling" of the history and relied on students' "finding out" in response to her question-led delivery. She asked a range of questions which drew on students' prior knowledge to take their thinking forward. For example, she asked, "Was the River Thames always this polluted?" and "Why had things got so bad by 1858?" She gave the class time for reflection in talk pairs before they came back to her with extended answers from which she required a forensic level of accuracy. The children had sustained opportunities to talk in pairs

using a range of media such as Google Classroom and images from political satirists of the time. They used these to support factual accuracy in their role play.

Extensive time was given to oral rehearsal through the role play before the comic strip was produced. Moreover, role play was supported with vocabulary lists appropriate to the era and the event: ‘By golly’, ‘by jove’, ‘good gracious’, stink, unpleasant, odor, repellant, grotesque, vile, odious, nauseating. The moves between student pairs giving feedback and her teacher’s dialogic practice ensured that students were thoroughly and actively engaged in their learning throughout the lesson.

This lesson was enriched by high-quality modelling. The children’s imaginations were stimulated by their teacher’s use of a tank of brown water that had various unpleasant things floating in it in order to give the children a visual replication of the Thames in its vile state of pollution. The use of props, and plenty of activation of children’s prior knowledge, meant that their learning was scaffolded in multiple ways.

This vignette illustrates how challenging activities (CA), language and literacy development (LLD), and modeling (M) combined to support both the conceptual and linguistic development of students. The use of contextualization (CTX) supported student engagement by reaching back into history while leveraging their own community knowledge and experiences. Students accomplished the learning goal of the lesson through supported, question-driven independent inquiry, teacher-guided modeling, and an explicit focus on content vocabulary and sustained language use by students.

### **Mixed Methods Discussion and Implication**

When the mixed methods data are examined together, this study offers empirical evidence that moves our field forward in identifying quality teaching across various contexts and

offers implications for theory, research, and professional learning in ways that position teachers and teacher educators to understand and then develop their abilities to create exemplary learning environments for multilingual students in content classrooms.

### **Patterns of Quality Teaching Across Nations**

Across the four national contexts, there are strong similarities and nuanced differences in teachers' use of the Enduring Principles of Learning. Table 6 provides the percentage of teachers rated at each level of implementation for each of the seven principles of learning. In addition, we combine the percentages at the enacting and integrating or highest levels to understand high level use of the principles of learning.

INSERT TABLE 6 ABOUT HERE

**Similarities.** Several observations are noteworthy when examining data by principle of learning and level of implementation. First, excellent teachers of multilingual learners in content classrooms are committed to engaging students in complex thinking as represented by 84% of teachers using Challenging Activities (CA, which includes levels 2-4). This means going beyond the “whats” to the “hows” and “whys” of student thinking in analyzing, evaluating, synthesizing, and having students provide rationales and elaboration of information. While complex thinking was concentrated at the developing level (32%), a majority of teachers (52%) were rated at the highest levels when enacting and integrating levels are combined. This commitment to complex thinking and challenging activities runs counter to watering down content or focusing merely on skill development for students with emerging language proficiencies.

Second, a commitment to students' use of language was observed at the highest concentration at the integrating level (32%) but represented 51% of observations when the enacting and integrating levels of Language and Literacy Development (LLD) are combined.

This means that teachers intentionally planned for sustained language expression (at least 10 minutes) while providing assistance through questioning, rephrasing, or modeling. It is worth noting, that no teachers in this study of quality teaching implemented at the “Not Observed” level for this principle, which is defined as instruction dominated by teacher talk.

Third, content teachers of multilingual students make extensive use of Modeling at the highest level on the rubric, being implemented at the integrating level (29%) and when combined with the enacting level, reaching 45%. This means that teachers not only provide models of behaviors, products, procedures, or thinking processes as part of their teaching, they also frequently assist students as they practice the very modeled expectations.

Fourth, teachers make use of collaborative small group work but rarely become full participants with student groups. For example, the use of Joint Productive Activity (JPA) occurred most often at the developing level (61%), where students either work in small groups independent of the teacher or in a whole class setting with the teacher. Only 26% of teachers became full participants in use of teacher-led small groups (levels 3 & 4). The Instructional Conversation (IC) was enacted by teachers at the emerging level (48%), which means talking to students about non-academic topics, responding in comfortable ways, or questioning to elicit student talk. The 29% at the developing level for the instructional conversation suggests teachers are much more likely to float from group to group to question or elicit responses. This falls short of the enacting/integrating aims of having a teacher intentionally becoming a full participant with a group to work dialogically to assess and then tailor their assistance to students in the learning process toward an academic goal.

Fifth, content teachers identified for their quality as teachers of multilingual students are using Contextualization and Critical Stance as principles of learning to the least impact. For

Contextualization (CTX), teachers implemented most often at the emerging (42%) or developing (32%) levels, suggesting these teachers were most likely to connect activities by unit themes, make comments to connect students' ideas to the academic concepts being taught, or make ad hoc or incidental connections to students' lives outside the classroom. Only 13% of teachers' lessons intentionally used students' knowledge or experience as starting points for learning new content. In a similarly way, Critical Stance was predominately implemented at the emerging (58%) or developing (39%) levels. This means the use of multiple modalities and sources of information, or the valuing of multilingualism were common. There was some limited use of original, open-ended products or tasks requiring complex thinking or reflecting on issues from multiple perspectives at the developing level. There were no examples of teachers engaging students in taking action to transform inequities within students' spheres of influence using content knowledge.

In summary, quality teaching of multilingual learners in content classes is marked by high levels of Challenging Activities (52%), Language and Literacy Development (51%), and Modeling (45%). Most strikingly, each of the four nation patterns of implementation featured use of Challenging Activities. Joint Productive Activity (26%) and Contextualization (26%) were also evidenced in teaching, but much less often at the highest levels. Overall, these patterns across nations illustrate five strong existing practices in terms of critical sociocultural pedagogies as defined by the Enduring Principles of learning. It is also important to note how the Principles interact with one another and in combination create stronger pedagogical practices for multilingual students. For example, Teachers in Finland, US, and England shared national patterns featuring simultaneous use of three principles of learning in the design of activities, which is one aim of the Enduring Principles of Learning pedagogy at higher levels. Finally,

Instructional Conversation (3%) and Critical Stance (0%) were not revealed as markers for quality teaching in the classrooms we observed; however, we feel that dialogic teaching (IC) and teaching to transform inequities (CS) represent meaningful areas of potential focus and future growth among content teachers of multilingual learners.

**Nuanced Differences.** Each of the four nations in this study also demonstrated differences in the combinations of principles of learning they used. These patterns of difference may well be tied to educational policies in these nations. For example, high stakes testing in the US and England may be influencing a greater focus on Language and Literacy Development (e.g., Primary National Strategy, 2006; Ravitch, 2010). The Finnish and English patterns uniquely featured high use of Modeling, which are artifacts of teacher education expectations (e.g., OSF, 2019; Tainio & Grünthal, 2016). Uniquely, only Finnish teachers featured Contextualization at the developing level in its dominant pattern of implementation. As demonstrated in the vignette, this happened most often in the use of examples or questioning that brought in students' familiar experiences or knowledge. While much more research is needed to understand the impetus behind differences observed across these four nations, the differences do point to important potential for more rigorous and ongoing international collaboration around how use of the Enduring Principles of Learning, in what combinations, make the most difference for multilingual student linguistic and conceptual development.

## **Implications**

The results of this study offer three important implications for teacher educators and teachers working with multilingual learners. First, we suggest that our study illustrates the enduring nature of the critical sociocultural Principles for Learning. We argue that they truly *do endure* across varying linguistic, cultural, curricular, political, and national boundaries and that

this relevance creates meaningful teaching and learning possibilities for multilingual students and their teachers. Second, we suggest that this study illustrates the value and possibility of focusing on excellence while also highlighting important opportunities for growth. Third, we argue that this research is worthy of both replication and expansion for the way that the Enduring Principles can ground collaborative research and practice across varied contexts. The following is an expansion of each of these three considerations.

For practice, initial teacher preparation and in-service professional development across international contexts can benefit from use of the Enduring Principles as a meaningful operationalization of critical sociocultural pedagogy for content teachers of multilingual students across varying cultural, linguistic, and national contexts. Grounded in a strong foundation of critical sociocultural theory and research, the Enduring Principles of Learning can be enacted with flexibility while providing consistent operationalizations of these important principles for learning. As a meaningful tool for teacher learning, the Enduring Principles of Learning provide a framework for pedagogical practices that can span from pre-service education throughout a teacher's entire career. As we documented with our use of the observation rubric, much quality teaching already exists and should be acknowledged as strong critical sociocultural pedagogical practices. We have illustrated the value in using a flexible instrument that can capture such quality in varied contexts while also providing useful directions in where to go next for improving practices. Our work also illustrates the value of the Enduring Principles in being able to see, compare, and discuss practices across varying cultural and linguistic contexts.

One clear direction of potential growth is towards using more frequent and tailored small group work with the teacher as collaborator (JPA) or in dialogic conversation (IC) with students. The research in the US has illustrated the strong benefits of these practices for multilingual

students learning (Saunders, 1999; Saunders & Goldenberg, 1999). Further, the use of Critical Stance (CS) was entirely unobserved at the highest levels of implementation in our dataset. Due to the growing international focus on equity movements like the Black Lives Matter movement and decolonization approaches, this is a positive and suggested area of focus for teachers and teacher educators concerned with the education of multilingual students. As mentioned above, research in the US suggests that high and consistent levels of Critical Stance led to strong learning outcomes for students while also working meaningfully to transform issues of inequity (Teemant & Hausman, 2013; Teemant et al., 2017, 2014, 2021).

We recommend that teacher educators and teachers consider the goals they have for students in their classrooms from an equity perspective. Research suggests that pluralist approaches that complexly offer opportunities for acculturation are most supportive of multilingual student learning and engagement (Birman & Addae, 2015; García et al., 2016) rather than approaches that focus on assimilationism. The Enduring Principles of Learning should be taught and engaged with from an equity perspective that creates the context for the expansive diversity that multilingual students bring to the classroom to be productive and sustained through pluralist democratic practices (Alim et al., 2020). This is an area of opportunity and growth, it appears, across all the national contexts where we observed. It is also an area where important and meaningful questions can be asked, such as: In what ways can or cannot teaching language and literacy at cognitively demanding levels be separated from critical stance? How does critical stance surface in teacher education programs?

Empirically, broader use of the Enduring Principles of Learning creates ongoing and wide-spread international possibilities for collaborative research and teaching. Because the observation rubric itself is flexible—grounded in broad critical sociocultural principles of



learning and not behaviorist/technocratic micro practices and interactions—it can be employed across contexts. Before we conducted this study, we did not know if this operationalization of the principles would work well across our diverse educational contexts. Now, we can confidently claim that it did. This has implications for linking disparate spaces and contexts through principle-grounded research and practice. At a minimum, our research suggests the value in expanding and replicating such international collaborative research with extensions into multinational teacher education practices to inform the ongoing development of teachers who successfully educate multilingual students, especially in content classrooms.

### **Conclusions**

Across each national-level dataset, patterns of quality teaching emerged as well as opportunities for growth. While there are limited claims we should make regarding national level education or teacher preparation practices, our research still suggests a picture of shared excellence is occurring across our four nations, with interesting pattern differences. This study also illustrates the value of the observation protocol we used and its ability to be used across four national contexts and to capture quality teaching and areas of growth that have the potential to richly inform teacher education and professional learning. The use of Critical Stance, in particular, underscores the need for greater work around equity, honoring students' realities outside the classroom in service of content learning. Additionally, as a first international study of its kind focused on individual teachers' practices (rather than the entire school or even national context), this study provides a variety of paths forward for our research team and others to consider in understanding excellence in multilingual education. Future studies that expand the number, length, and time span of observations are recommended. Nevertheless, this study enhances a hitherto limited evidence base for teaching multilingual learners in content

classrooms with examples of quality teaching, showing both the complexity and opportunity we have in our work preparing content teachers to work well with multilingual students in national and international contexts.

### References

- Alim, H. S., Paris, D., & Wong, S. P. (2020). Culturally sustaining pedagogy: A critical framework for centering communities. In N. S. Nasir, C. D. Lee, R. Pea, & M. M. de Royston (Eds.) *Handbook of the cultural foundations of learning* (pp. 261-276). Routledge.
- Alisaari, J., Heikkola, L. M., Acquah, E. O., & Commins, N. L. (2019). Monolingual ideologies confronting multilingual realities. Finnish teachers' beliefs about linguistic diversity. *Teaching and Teacher Education* 80, 48-58.
- Anderson, C., Foley, Y., Sangster, P., Edwards, V., & Rassool, N. (2016). *Policy, Pedagogy and Pupil Perceptions: EAL in Scotland and England*. University of Edinburgh and The Bell Foundation.
- Baumann, B. (2017). Sprachförderung und Deutsch als zweitsprache in der lehrerbildung: Ein deutschlandweiter überblick. In M. Becker-Mrotzek, P. Rosenberg, C. Schroeder and A. Witte (eds) *Deutsch als zweitsprache in der lehrerbildung* (pp. 9-26). Waxmann.
- Becker-Mrotzek, M., Hentschel, B., Hippmann, K., & Linnemann, M. (2012). *Sprachförderung in deutschen schulen: Die sicht der lehrerinnen und lehrer*. Ergebnisse einer Umfrage unter Lehrerinnen und Lehrern. Durchgeführt von IPSOS (Hamburg) im Auftrag des Mercator-Instituts für Sprachförderung und Deutsch als Zweitsprache, Universität zu Köln.

- Berkel-Otto, L., Hansen, A., Hammer, S., Lemmrich, S., Schroedler, T., & Uribe, A. (2021). *Multilingualism and teacher education in Germany: Approaches under the condition of increasing diversity and federalism*. In M. Wernicke, S. Hammer, A. Hansen, & T. Schroedler (Eds.). *Preparing Teachers to Work with Multilingual Learners*. Channel View Publications/Multilingual Matters.
- Birman, D., & Addae, D. (2015). Acculturation. In C. Suárez-Orozco, M. M. Abo-Zena, & A. K. Marks (Eds.) *Transitions: The development of children of immigrants* (pp. 122-141). New York University Press.
- Creswell, J.W., & Plano Clark, V.L. (2007). *Designing and conducting mixed methods research*. SAGE Publications.
- Deng, Q., Kiramba, L., & Viesca, K. M. (2020). Factors associated with novice general education teachers' preparedness to work with multilingual learners: A multilevel study. *Journal of Teacher Education*, 72(4), 489-503.  
<https://doi.org/10.1177/0022487120971590>
- Department for Education and Skills. (2021). *School Pupils and Their Characteristics*. Department for Education. Retrieved 21.06.21 from <https://explore-education-statistics.service.gov.uk/find-statistics/school-pupils-and-their-characteristics>
- Department for Education and Skills. (2019). *Attainment of pupils with English as an additional language: Ad hoc notice June 2019*. Nottingham: Department for Education.
- Department for Education and Skills. (2013). *National Curriculum in English: Primary Curriculum*. [www.education.gov.uk/nationalcurriculum](http://www.education.gov.uk/nationalcurriculum).

- Department for Education and Skills. (2007). *Excellence and Enjoyment: Learning and Teaching for Bilingual Children in the Primary Years*. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/190589/Learning\\_and\\_teaching\\_for\\_bilingual\\_children.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/190589/Learning_and_teaching_for_bilingual_children.pdf)
- Doherty, R. W., & Hilberg, R. S. (2007). Standards for effective pedagogy, classroom organization, English proficiency, and student achievement. *The Journal of Educational Research*, 101(1), 24-35. doi:10.3200/JOER.101.1.24-35
- Doherty, R. W., Hilberg, R. S., Epaloose, G., & Tharp, R. G. (2002). Standards performance continuum: Development and validation of a measure of effective pedagogy. *Journal of Educational Research*, 96(2), 78-89.
- Ellis, R. (2015). *Understanding second language acquisition* (2<sup>nd</sup> edition). Oxford University Press.
- Estrada, P. (2005). The courage to grow: A researcher and teacher linking professional development with small-group reading instructional and reading achievement. *Research in the Teaching of English*, 39(1), 320-364.
- Estrada, P., & Imhoff, B. (1999). *Patterns of instructional activity: Excellence, inclusion, fairness, and harmony in six first grade classrooms* (Technical Report No. 3). University of California, Center for Research on Education, Diversity & Excellence.
- Faltis, C. J., & Valdés, G. (2016). Preparing teachers for teaching in and advocating for linguistically diverse classrooms: A vade mecum for teacher educators. In Gitomer & C. A. Bell (Eds.), *Handbook of research on teaching*. American Educational Research Association.
- Flynn, N., & Curdt-Christiansen, X. L. (2018). Intentions versus enactment: making sense of

- policy and practice for teaching English as an additional language. *Language and Education*, 32(5), 410-427. <https://doi.org/10.1080/09500782.2018.1475484>
- Flynn, N. (2019). Teachers and Polish children: capturing changes in the linguistic field. *British Journal of Sociology of Education*, 40(1), 65-82. <https://doi.org/10.1080/01425692.2018.1481366>
- Freeman, Y. & Freeman, D. (Eds.). (2014). *Research on preparing preservice teachers to work effectively with emergent bilinguals*. Emerald.
- Freire, P. (1994). *Pedagogy of the oppressed*. Continuum.
- García, O., Johnson, S. I., & Seltzer, K. (2017). *The translanguaging classroom: Leveraging student bilingualism for learning*. Caslon.
- Giroux, H. (1988). *Teachers as intellectuals: Toward a critical pedagogy of learning*. Bergin and Garvey Press.
- Gottesman, I. (2016). *The critical turn in education: From Marxist critique to poststructuralist feminism to critical theories of race*. Routledge.
- Larsen-Freeman, D. (1991). Second language acquisition research: Staking out the territory. *TESOL Quarterly*, 25, 315-350.
- Lau v. Nichols, 414 U.S. 563 (1974). <https://supreme.justia.com/cases/federal/us/414/563/>
- Lucas, T., Villegas, A.M., & Freedson-Gonzalez, M. (2008). Linguistically responsive teacher education: Preparing classroom teachers to teach English language learners. *Journal of Teacher Education*, 59(4), 361-373.
- Lucas, T., & Grinberg, J. (2008). Responding to the linguistic reality of mainstream classrooms: Preparing all teachers to teach English language learners. In M. Cochran-Smith, S. Feiman-Nemser, D. J. McIntyre, & K. E. Demers (Eds.), *Handbook of research on*

- teacher education: Enduring questions in changing contexts* (pp. 606-636).  
Routledge/Taylor & Francis Group and The Association of Teacher Educators.
- Lucas, T. (2011). *Teacher preparation for linguistically diverse classrooms: A resource for teacher educators*. Routledge.
- Kairavuori, S. & Sintonen, S. (2016). Arts education: Instruments of expression and communication. In H. Niemi, A. Toom & A. Kallioniemi (Eds.) *Miracle of education: The principles and practices of teaching and learning in Finnish schools (Second revised edition)* (pp. 211-225). Sense Publishers.
- Kultusministerium (2014). *Förderung von bildungserfolg und teilhabe von schülerinnen und schülern nichtdeutscher herkunftssprache*. RdErl. d. MK v. 1.7.2014 -25 -81 625 - VORIS 2241.
- McMullen, J., Hannula-Sormunen, M. M., Kainulainen, M., Kiili, K., & Lehtinen, E. (2019). Moving mathematics out of the classroom: Using mobile technology to enhance spontaneous focusing on quantitative relations. *British Journal of Educational Technology*, 50(2), 562-573.
- Mercer, N. (2019). *Language and the joint creation of knowledge: Selected works of Neil Mercer*. Routledge.
- Moll, L. C., Amanti, C., Neff, D., & Gonzalez, N. (1992). Funds of knowledge for teaching: Using a qualitative approach to connect homes and classrooms. *Theory Into Practice*, 31(2), 132-141.
- Murphy, V., & Unthia, A. (2015). *A systematic review of intervention research examining English language and literacy development in children with English as an Additional Language (EAL)*. University of Oxford Department of Education

- National Agency of Education (2014). *Perusopetuksen opetussuunnitelman perusteet* [Finnish Core Curriculum for Basic Education]. Määräykset ja ohjeet 2014:96. [http://www.oph.fi/download/163777\\_perusopetuksen\\_opetussuunnitelman\\_perusteet\\_2014.pdf](http://www.oph.fi/download/163777_perusopetuksen_opetussuunnitelman_perusteet_2014.pdf)
- National Agency of Education (2015). *Lukion opetussuunnitelman perusteet*. [Finnish Core Curriculum for Upper Secondary Education]. Määräykset ja ohjeet 2015:48. [http://www.oph.fi/download/172124\\_lukion\\_opetussuunnitelman\\_perusteet\\_2015.pdf](http://www.oph.fi/download/172124_lukion_opetussuunnitelman_perusteet_2015.pdf)
- Niedersächsischer Landtag – 15. Wahlperiode (2007). *Drucksache 15/4017 Antwort auf eine Große Anfrage der Fraktion Bündnis 90/Die Grünen vom 29.05.2007*.
- Niedersächsisches Schulgesetz (NSchG) [School law of Lower Saxony] 3. März 1998 § 54 a Sprachfördermaßnahmen. <http://www.nds-voris.de/jportal/?quelle=jlink&query=SchulG+ND+%C2%A7+54a&psml=bsvorisprod.psml&max=true>(accessed 25 June 2021).
- Niemi, H. 2016. The societal factors contributing to education and schooling in Finland.: The Finnish education: equity and quality as its main objectives. In H. Niemi, A. Toom & A. Kallioniemi (Eds.) *Miracle of Education. The principles and practices of teaching and learning in Finnish schools (Second revised edition)* (pp. 23-40). Sense Publishers.
- Official Statistics of Finland. (2019). Population structure; Immigrants and Integration. Helsinki: Statistics Finland [referred: 28.1.2019]. Accessed via: <http://www.stat.fi>
- Primary National Strategy. (2006). *Literacy framework unit plans and resources*. Department for Education.

<http://webarchive.nationalarchives.gov.uk/20110809091832/http://teachingandlearningresources.org.uk/primary/literacy>

Ravitch, D. (2010). *The death and life of the great American school system: How testing and choice are undermining education*. Basic Books.

Saunders, W. M. (1999). Improving literacy achievement for English learners in transitional bilingual programs. *Educational Research and Evaluation*, 5 (4), 345–381.

Saunders, W.M., & Goldenberg, C. (1999). *The effects of instructional conversations and literature logs on the story comprehension and thematic understanding of English proficiency and limited English proficient students*. Center for Research on Education, Diversity & Excellence.

Skidmore, D., & Murakami, K. (2016). *Dialogic pedagogy: The importance of dialogue in teaching and learning*. Multilingual Matters.

Smagorinsky, P. (2013). What does Vygotsky provide for the 21<sup>st</sup>-century language arts teacher? *Language Arts*, 90 (3), 192-204.

Spolsky, B. (1989). *Conditions for second language learning*. Oxford University Press.

Statistisches Bundesamt [German Federal Statistical Office] (2018). *Bevölkerung und erwerbstätigkeit. bevölkerung mitmigrationshintergrund – Ergebnisse des mikrozensus 2017*. Wiesbaden: Statistisches Bundesamt.

Strand, S., Malmberg, L. & Hall, J. (2015) *English as an additional language (EAL) and educational achievement in England: An analysis of the national pupil database*. Available at: <https://educationendowmentfoundation.org.uk/evidence-summaries/evidence-reviews/english-as-an-additional-language-eal/>

Tainio, L. & Grünthal, S. (2016). Language and literature education: principles and reflections



- on mother tongue and literature. In H. Niemi, A. Toom & A. Kallioniemi (Eds.) *Miracle of education: The principles and practices of teaching and learning in Finnish schools (Second revised edition)* (pp. 145-156). Sense Publishers.
- Takanishi, R. & Le Menestrel, S. (2017) *Promoting the educational success of children and youth learning English: Promising futures*. National Academies Press.
- Teemant, A. (2014). A mixed methods investigation of instructional coaching for teachers of diverse learners. *Urban Education*, 49(5), 574-604. DOI:10.1177/0042085913481362
- Teemant, A. (2015) Living Critical Sociocultural Theory in Classroom Practice. *MinneTESOL Journal*. Available at <http://minnetesoljournal.org/wp-content/uploads/2015/12/Teemant-2015-MinnTESOLInvitedPaper.pdf>
- Teemant, A., (2018). Sociocultural theory as everyday practice: The challenge of K-12 teacher preparation for multilingual and multicultural learners. In J. P. Lantolf, & M. E. Poehner (Eds.) with M. Swain (pp. 529-550), *The Routledge handbook of sociocultural theory and second language development*. Routledge.
- Teemant, A., & Hausman, C. S. (2013, April 15). The relationship of teacher use of critical sociocultural practices with student achievement. *Critical Education*, 4(4). Retrieved from <http://ojs.library.ubc.ca/index.php/criticaled/article/view/182434>.
- Teemant, A., Leland, C., & Berghoff, B. (2014, April). Development and validation of a measure of Critical Stance for instructional coaching. *Teaching and Teacher Education*, 39, 136-147. Retrieved from <http://dx.doi.org/10.1016/j.tate.2013.11.008>.
- Teemant, A., Hausman, C., & Tyra, S. K. (2021). Using instructional coaching to improve teachers' pedagogical knowledge for teaching English Learners [Manuscript submitted for publication]. Urban Teacher Education, Indiana University – Purdue

- University Indianapolis.
- Tharp, R.G. (2006). Four hundred years of evidence: Culture, pedagogy, and Native America. *Journal of American Indian Education* 45(2), 6-25.
- Tharp, R. G., Estrada, P., Dalton, S. S., & Yamauchi, L. (2000). *Teaching transformed: Achieving excellence, fairness, inclusion, and harmony*. Westview Press.
- Vertovec, S. (2007) Superdiversity and its implications. *Ethnic and Racial Studies*, 30(6), 1024-1054. <https://doi.org/10.1080/01419870701599465>
- Virta, A. & Yli-Panula, E. (2016). History, social studies and geography education in Finnish schools and teacher education. In H. Niemi, A. Toom & A. Kallioniemi (Eds.) *Miracle of Education. The principles and practices of teaching and learning in Finnish schools (Second revised edition)* (pp. 191-209). Rotterdam: Sense Publishers.
- Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. (M. Cole, V. John-Steiner, S. Scribner, & E Souberman, Eds.). Cambridge, MA: Harvard University Press.
- Vygotsky, L. S. (1997). *Educational psychology*. Boca Raton, Florida: St. Lucie Press.
- Wells, G. (1999). *Dialogic inquiry: Toward a sociocultural practice and theory of education*. Cambridge: Cambridge University Press.
- Wernicke, M., Hammer, S., Hansen, A., Schroedler, T. (eds.) (2021). *Preparing Teachers to Work with Multilingual Learners*. Bristol: Channel View Publications / Multilingual Matters.

Wyatt, T. R., Yamauchi, L. A., & Chapman–DeSousa, B. (2012). Using the CREDE standards for effective pedagogy in a Greenlandic settlement school. *Multicultural Perspectives*, 14(2), 65-72. doi:10.1080/15210960.2012.673304

**Table 1***Participants by Nation, Grade, Content-Area, and Percentage of Multilingual Students*

<b>Nation</b>	<b>Local Grade</b>	<b>Student's Age</b>	<b>Content Area</b>	<b>% of Multilingual Students</b>
<b>Germany – Data Collected August 2017</b>				
Teacher G - A	3 <sup>rd</sup>	8-9	English	10%
Teacher G - B	2 <sup>nd</sup>	7-8	Physical Education	5%
Teacher G - C	2 <sup>nd</sup>	7-8	German Language Arts (GLA)	22%
Teacher G - D	2 <sup>nd</sup>	7-8	Social Studies	5%
Teacher G - E	2 <sup>nd</sup>	7-8	GLA	12%
<b>Finland – Data Collected November 2017</b>				
Teacher F - A	6 <sup>th</sup>	12-13	Math	35%
Teacher F - B	2 <sup>nd</sup>	8-9	Math	54%
Teacher F - C	5 <sup>th</sup>	11-12	Math	18%
Teacher F - D	1 <sup>st</sup>	7-8	Finnish Language Arts (FLA)	19%
Teacher F - E	1 <sup>st</sup>	7-8	FLA	78%
Teacher F - F	1 <sup>st</sup>	7-8	FLA	60%
Teacher F - G	5 <sup>th</sup>	11-12	FLA	64%
Teacher F - H	6 <sup>th</sup>		FLA & History	16%
<b>US – Data Collected April 2018</b>				
Teacher US - A	4 <sup>th</sup>	9-10	Math	58%
Teacher US - B	1 <sup>st</sup>	6-7	English Language Arts (ELA)	76%
Teacher US - C	3 <sup>rd</sup>	8-9	ELA	41%
Teacher US - D	2 <sup>nd</sup>	7-8	ELA	35%
Teacher US - E	6 <sup>th</sup>	11-12	ELA	27%
Teacher US - F	4 <sup>th</sup>	9-10	ELA	29%
Teacher US - G	5 <sup>th</sup>	10-11	ELA	58%
Teacher US - H	9 <sup>th</sup>	14-15	ELA	5%
Teacher US - I	7 <sup>th</sup>	12-13	Social Studies	9%
Teacher US - J	4 <sup>th</sup>	9-10	ELA	10%
<b>England – Data Collected May 2018</b>				
Teacher E - A	Reception	4-5	Phonics/ELA	79%
Teacher E - B	Year 5	9-10	History	79%
Teacher E - C	Year 5	9-10	Reading	19%
Teacher E - D	Year 2	6-7	ELA	50%
Teacher E - E	Year 4	8-9	ELA	80%
Teacher E - F	Year 3	7-7	ELA	80%
Teacher E - G	Reception	4-5	ELA	100%
Teacher E - H	Year 6	10-11	ELA	100%

**Table 2***Enduring Principles Individual Ratings with Group Means & Modes in Germany*

Teacher	JPA	LLD	CTX	CA	IC	CS	M	Total	Level	Mean	Mode
G - A	2	1	1	2	1	1	3	11	2 Developing	1.57	1
G - B	2	1	2	1	1	0	0	7	1 Emerging	1.00	1
G - C	2	2	2	2	1	2	1	12	2 Developing	1.71	2
G - D	2	1	1	2	1	1	0	8	2 Developing	1.14	1
G - E	2	2	1	3	1	1	3	13	3 Enacting	1.86	1
Mean	2.00	1.40	1.40	2.00	1.00	1.00	1.40	10.20	2 Developing		
Mode	2	1	1	2	1	1	0/3				

**Table 3***Enduring Principles Individual Ratings with Group Means & Modes in Finland*

Teacher	JPA	LLD	CTX	CA	IC	CS	M	Total	Level	Mean	Mode
F - A	2	2	3	3	0	1	2	13	3 Enacting	1.86	2
F - B	2	1	4	4	0	1	4	16	3 Enacting	2.29	4
F - C	1	1	1	1	1	1	1	7	1 Emerging	1.00	1
F - D	1	2	1	3	1	1	1	10	2 Developing	1.43	1
F - E	4	4	1	4	2	1	4	20	4 Integrating	2.86	4
F - F	0	1	1	0	0	1	1	4	1 Emerging	0.57	1
F - G	2	1	2	3	2	1	3	14	3 Enacting	2.00	2
F - H	2	2	3	2	0	2	1	12	2 Developing	1.71	2
Mean	1.75	1.75	2.00	2.50	0.75	1.13	2.13	12.00	2 Developing		
Mode	2	1	1	3	0	1	1				

**Table 4***Enduring Principles Individual Ratings with Group Means & Modes in the US*

Teacher	JPA	LLD	CTX	CA	IC	CS	M	Total	Level	Mean	Mode
US - A	2	1	1	1	1	1	2	9	2 Developing	1.29	1
US - B	3	3	1	2	2	1	2	14	3 Enacting	2.00	2
US - C	3	3	2	2	2	1	1	14	3 Enacting	2.00	2
US - D	2	2	1	3	1	1	3	13	3 Enacting	1.86	1
US - E	2	3	3	3	1	1	3	16	3 Enacting	2.29	3
US - F	2	3	2	2	0	1	1	11	2 Developing	1.57	2
US - G	4	4	4	4	2	2	0	20	4 Integrating	2.86	4
US - H	1	4	1	4	1	1	4	16	3 Enacting	2.29	1
US - I	2	1	2	1	0	1	1	8	2 Developing	1.14	1
US - J	4	4	3	2	4	2	0	19	4 Integrating	2.71	4
Means	2.50	2.80	2.00	2.40	1.40	1.20	1.70	13.00	3 Enacting		
Mode	2	3	1, 2	2	1	1	1				

**Table 5***Enduring Principles Individual Ratings with Group Means & Modes in England*

Teacher	JPA	LLD	CTX	CA	IC	CS	M	Total	Level	Mean	Mode
E - A	2	4	4	4	1	2	4	21	Integrating	3.00	4
E - B	2	4	4	4	1	2	4	21	Integrating	3.00	4
E - C	2	4	1	4	1	2	4	18	Integrating	2.57	4
E - D	3	3	2	2	2	2	0	14	Enacting	2.00	2
E - E	2	4	2	4	1	2	4	19	Integrating	2.71	2, 4
E - F	4	4	1	3	2	2	4	20	Integrating	2.86	4
E - G	3	3	2	2	2	2	0	14	Enacting	2.00	2
E - H	2	4	2	4	2	2	4	20	Integrating	2.86	2
Mean	2.5	3.75	2.25	3.38	1.5	2	3	18.38	Integrating		
Mode	2	4	2	4	1, 2	2	4				



**Table 6***Percentage of Ratings by Level of Implementation Across Individual Principles*

Rating Level	JPA	LLD	CTX	CA	IC	CS	M
0 Not Observed	3%	0%	0%	3%	19%	3%	19%
1 Emerging	10%	29%	42%	13%	48%	58%	26%
2 Developing	61%	19%	32%	32%	29%	39%	10%
3 Enacting	13%	19%	13%	23%	0%	0%	16%
4 Integrating	13%	32%	13%	29%	3%	0%	29%
3 & 4 Combined	26%	51%	26%	52%	3%	0%	45%

## Appendix A

### Observation tool Utilized in OPETAN Study: Adapted Standards Performance Continuum Plus

STANDARDS PERFORMANCE CONTINUUM PLUS (SPC Plus)					
A Rubric for Observing Classroom Enactments of the Enduring Principles of Learning as Critical Sociocultural Pedagogical Practices [Adapted from the following sources: Teemant, Leland, and Berghoff, (2014) <sup>1</sup> ; Doherty, Hilberg, Epaloose, and Tharp (2002) <sup>2</sup> ; and Tharp (2006) <sup>3</sup> ]					
	NOT OBSERVED	EMERGING	DEVELOPING	ENACTING	INTEGRATING
<i>General Definition:</i>	<i>The principle is not observed.</i>	<i>One or more elements of the principle are enacted.</i>	<i>The teacher designs and enacts activities that demonstrate a partial enactment of the principle.</i>	<i>The teacher designs, enacts, and assists in activities that demonstrate a complete enactment of the principle.</i>	<i>The teacher designs, enacts, and assists in activities that demonstrate skillful integration of multiple principles simultaneously.</i>
<b>Joint Productive Activity</b> <i>Teacher and Students Producing Together</i>	Students work independently of one another.	Students are seated with a partner or group, AND (a) collaborate* or assist one another, OR (b) are instructed in how to work in groups, OR (c) contribute individual work, not requiring collaboration, to a joint product*.	The teacher and students collaborate on a joint product in a whole-class setting, OR students collaborate on a joint product in pairs or small groups.	The teacher and a small group of students collaborate on a joint product. (Teacher does not float.)	The teacher designs, enacts, and collaborates in joint productive activities that demonstrate skillful integration* of multiple principles simultaneously.
<b>Language &amp; Literacy Development</b> <i>Developing Language and Literacy Across the Curriculum</i>	Instruction is dominated by teacher talk.	(a) The teacher explicitly models appropriate language; OR (b) students engage in brief, repetitive, or drill-like reading, writing, or speaking activities; OR (c) students engage in social talk while working.	The teacher provides structured opportunities for academic language development in sustained* reading, writing or speaking activities. (Sustained means at least 10 minutes. If it is a whole class arrangement, then more than 50% of the students are participating. No turn taking.)	The teacher designs and enacts instructional activities that generate language expression and development of "content vocabulary," AND assists* student language use or literacy development through questioning, rephrasing, or modeling. (Teacher can float.)	The teacher designs, enacts, and collaborates in joint development activities that demonstrate skillful integration of multiple principles simultaneously.
<b>Contextualization</b> <i>Making Meaning – Connecting School to Students' Lives</i>	New information is presented in an abstract, disconnected manner.	The teacher (a) includes some aspect of students' everyday experience in instruction, OR (b) connects classroom activities by theme or builds on the current unit of instruction, OR (c) includes parents or community members in activities or instruction, OR (d) connects student comments to content concepts.	The teacher makes incidental* connections between students' prior experience/knowledge from home, school, or community and the new activity/academic concepts.	The teacher integrates* the new activity/academic concepts with students' prior knowledge from home, school, or community to connect everyday and schooled concepts. (Teacher does not have to be present. This can be about activity design.)	The teacher designs, enacts, and assists in contextualized activities that demonstrate skillful integration of multiple principles simultaneously.
<b>Challenging Activities</b> <i>Teaching Complex Thinking</i>	Activities rely on repetition, recall, or duplication to produce factual or procedural information.	The teacher (a) accommodates students' varied ability levels, OR (b) sets and presents quality standards* for student performance, OR (c) provides students with feedback on their performance.	The teacher designs and enacts "challenging activities" that connect instructional elements to academic content OR advance student understanding to more complex levels.	The teacher designs and enacts challenging activities with clear standards/expectations and performance feedback, AND assists* the development of more complex thinking. (Teacher can float.)	The teacher designs, enacts, and assists in challenging activities that demonstrate skillful integration of multiple principles simultaneously.
<b>Instructional Conversation</b> <i>Teaching Through Conversation</i>	Lecture or whole-class instruction predominates.	With individuals or small groups of students, the teacher (a) responds in ways that are comfortable for students, OR (b) uses questioning, listening or rephrasing to elicit student talk, OR (c) converses on a nonacademic topic.	The teacher converses with a small group of students on an academic topic AND elicits student talk with questioning, listening, rephrasing, or modeling.	The teacher designs and enacts an instructional conversation* (IC) with a clear academic goal*; listens carefully to assess and assist student understanding; AND questions students on their views*, judgments, or rationales. Student talk occurs at higher rates than teacher talk. (No floating.)	The teacher designs, enacts, and assists in instructional conversations that demonstrate skillful integration of multiple principles simultaneously.
<b>Critical Stance</b> <i>Teaching to Transform Inequities</i>	Instruction reflects appropriate content-area standards.	The teacher designs instruction using variety, which includes a) multiple sources of information; OR b) values and respects multiple perspectives; OR c) supports learning through multiple modalities.	Using variety, the teacher designs instruction that positions students to generate new knowledge* resulting in a) original contributions, products, or expertise OR b) students' questioning and reflecting on issues from multiple perspectives.	The teacher designs or facilitates instruction that consciously engages learners in a) interrogating conventional wisdom and practices; AND b) reflection upon ramifications of such practices; AND c) actively seeks to transform inequities within their scope of influence within the classroom and larger community.	The teacher designs, enacts, and assists in critical stance activities that demonstrate skillful integration of multiple principles simultaneously.
<b>Modeling Learning</b> <i>Teaching Through Observation</i>	Students begin working immediately following a verbal explanation.	The teacher, or student, models behaviors, thinking processes, or procedures, but does not provide an opportunity for students to practice.	The teacher provides a model of a completed product that students then make, or models the behaviors, thinking processes, or procedures necessary for the task.	The teacher provides a model of a completed product that students then make, or models the behaviors, thinking processes, or procedures necessary for the task, and assists students during practice.	The teacher designs, enacts, and assists in modeling activities that demonstrate skillful integration of multiple principles simultaneously.

<sup>1</sup> Teemant, A., Leland, C., & Berghoff, B. (2014, April). Development and validation of a measure of Critical Stance for instructional coaching. *Teaching and Teacher Education*, 39, 136-147. Retrieved from <http://dx.doi.org/10.1016/j.tate.2013.11.008>.

<sup>2</sup> Doherty, R. W., Hilberg, R. S., Epaloose, G., & Tharp, R. G. (2002). Standards Performance Continuum: Development and validation of a measure of effective pedagogy. *Journal of Educational Research*, 96(2), 78-89.

<sup>3</sup> Tharp, R.G. (2006). Four hundred years of evidence: Culture, pedagogy, and Native America. *Journal of American Indian Education* 45(2), 6-25.