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A Case Study of Chinese Teachers' Professional Learning in a Chinese Dual Language Immersion Program

Jiazhen Yan and William J. Davis

Southern Utah University — Utah, USA

Author Notes

Jiazhen Yan https://orcid.org/0000-0002-7215-1938
William J. Davis https://orcid.org/0000-0002-7803-8311

Abstract: *The purpose of this study is to examine the professional development (PD) needs of Chinese dual language immersion program (DLI) educators, particularly the PD supports these teachers receive. This instrumental case study examined the professional learning of four Chinese-language DLI teachers through semi-structured interviews and observations of classroom teaching and PD trainings. Findings suggest the Utah DLI model indelibly shapes teachers' work and learning as teachers. Chinese DLI teachers also identify needs that are particular to their teaching role like adapting/translating resources; however, the findings also confirm other scholarship indicating Chinese DLI teachers' particular needs are not well supported. PD received by participants was general in nature, rather than differentiated for Chinese DLI teachers' needs.*

Keywords: Dual language immersion programs; Chinese language learning; teacher learning; professional development; Utah DLI Model

The purpose of this study is to examine the professional development (PD) needs of Chinese dual language immersion (DLI) program educators and the PD supports they receive. DLI teachers work in classrooms where learning is done through immersion in a target language and the English language, thereby increasing language proficiency and the absorption of different cultures (Spicer-Escalante, 2017). DLI programs are believed to provide various benefits to participants regardless of how the languages are used (e.g., specific patterns and rates of language) (Anderson, 2014; Soderman, 2010), including cultural exchange, global awareness, and economic opportunities (Boyle et al., 2015; DeMatthews & Izquierdo, 2016). Chinese DLI teachers are reported in the literature to possess special needs as teachers, but such needs have not been well addressed in the existing PD or training literature (Sung & Tsai, 2019). This case study, which is part of a larger study of PD supports for Chinese DLI program teachers, focuses on the PD needs stated by the Chinese language DLI teachers and the PD supports they receive.

Correspondence concerning this article should be addressed to Jiazhen Yan, E-mail: yanjiazhen0228@gmail.com

THEORETICAL FRAMEWORK

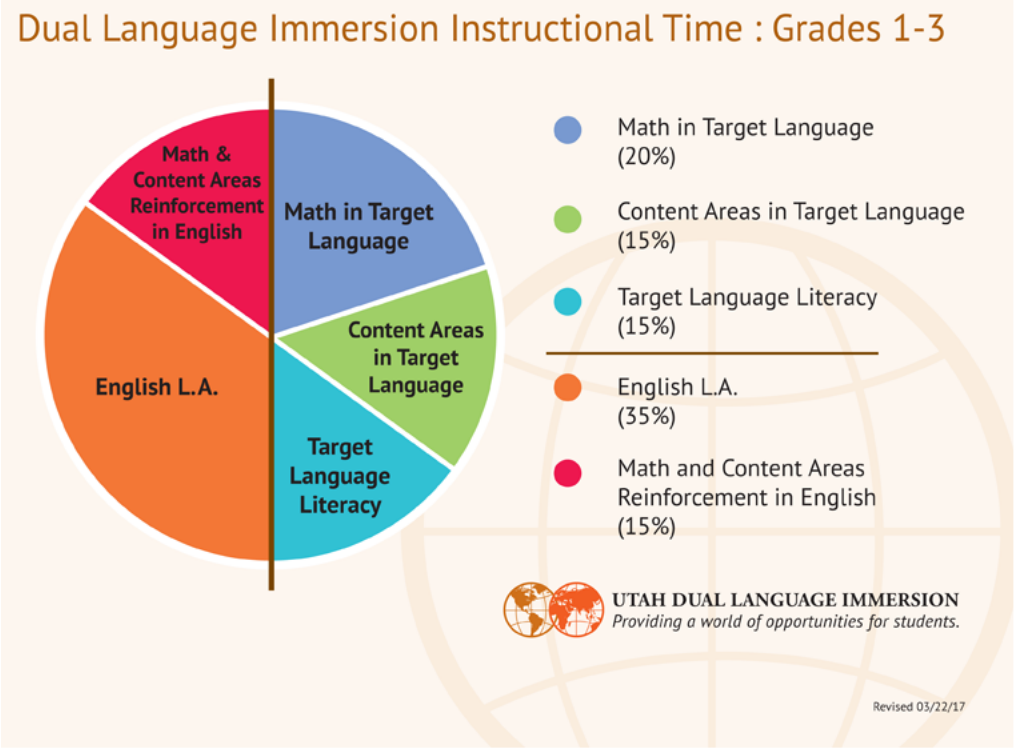
Language immersion programs have grown alongside Chinese language program enrollment, the latter increasing from 60,000 US public school students to more than 200,000 in less than ten years (Chinese progress as a world language, 2021, January 6; Robelen, 2010). DLI programs, in which literacy and content instruction are provided in more than one language (Spicer-Escalante, 2017), are increasingly common, in part spurred by the benefits associated with DLI programs; such benefits include the promotion of 21st century skills like bilingualism, biliteracy, and global or cultural awareness, developing awareness of meta-linguistic structures and other linguistic elements, and cultivating cognitive flexibility (Boyle et al., 2015; Cammarata & Tedick, 2012; Soderman, 2010). The growth of Chinese language education and DLI programs has led to an increase in the number of Chinese-language teachers in the US, a growth that has contributed to world language educators' and researchers' questions concerning the knowledge and skill base for foreign language teachers (e.g., Everson, 2016). Peng (2016) identified the foremost challenge in the Chinese language education field as the critical shortage of qualified teachers along with the lack of effective mechanisms for teacher certification. In a state like Utah, with its own growing statewide DLI programs in Chinese and other languages, these challenges may be more acutely felt.

Utah developed its own DLI program for native speakers of English (i.e., a one-way DLI program) in 2008 to prepare students for the 21st century "while honoring multilingualism and multiculturalism as assets" (Boyle et al., 2015; Wade et al., as cited by Spicer-Escalante, 2017, p. 12). Participating schools start their programs by pairing a first grade English-language teacher with a target-language teacher for whichever language the school's program uses (e.g., Chinese, Spanish, Russian, etc.). To assuage parental and administrative fears concerning an extended immersion component's possible negative impact on English language proficiency, Utah mandates a 50:50 model of language instruction; in other words, students in each grade are divided into two groups and spend half the day learning in each language. As first grade students move to second grade, the two-teacher arrangement is replicated in second grade, and the school's program continues to expand each year into subsequent grades. By dividing students into two DLI classes in each elementary grade level, Utah's 50:50 model enables twice as many students to be enrolled in the immersion program while only allocating one full-time employee per grade to the target language (Leite & Cook, 2015).

Language use and content instruction by Utah DLI teachers are strictly divided. The program attempts to create an immersion experience by requiring target-language teachers to only teach in the target language of the program (Leite & Cook, 2015). Content instruction responsibilities are shared by the teachers, who must partner together to teach content using prescribed instructional time allotments at each grade level (Pascopella, 2013). Figure 1 shows the instructional time allotments for first, second, and third grades. While English-language and target-language teachers are solely responsible for language instruction in their respective teaching languages, they share responsibility for math and other content area instruction. In these grade levels, the target-language teacher is primarily responsible for math and the other content areas, whereas the English-language teacher provides reinforcement for these subjects. Using these structures and providing curriculum apps and resources like Mandarin Matrix and Lexia, among others, Utah's DLI model has been replicated using multiple languages in schools across the state (c.f., Leite & Cook, 2015).

Figure 1

DLI Grades 1-3 Instructional Time (Utah Dual Language Immersion, 2017)



In this study, we use complexity theory to examine Chinese DLI teachers' needs. Teachers' PD needs include a complex array of teacher decision-making and pedagogical behaviors, beliefs, and contextual factors (e.g., Borko, 2004; Feryok, 2010; Guo et al., 2019; Opfer & Pedder, 2011). We see meeting teachers' needs through PD as "complex, dynamic, and contextualized" (Feryok, 2010). DLI teachers invariably find themselves within "nested levels of complex systems" of partner, grade level, and other teams within and beyond their home schools (Opfer & Pedder, 2011, p. 379). Despite these complex and varied needs, PD supports are seldom differentiated or tailored for teachers' needs (Grierson & Woloshyn, 2013; Hendrick, 2005; Tomlinson, 2005). We have adapted needs analysis in language teaching to study PD needs within this complex system (c.f., Berwick, 1989; Sumarsono et al., 2017). DLI teachers' needs are felt needs, or "those [needs] which learners have" (Berwick, 1989, p. 55). Perceived needs are the "judgments of certified experts about the educational gaps in other people's experience" (p. 55). Our study is guided by the following research questions: 1) What felt needs are stated by Chinese-language teachers, or otherwise evident, in a district's Chinese DLI program?, and 2) In what way(s) are the school, district, and state identifying and/or meeting the needs of Chinese-language teachers in a Chinese DLI program?

METHODS

This study is an instrumental case study intended to understand a phenomenon beyond the case itself (Stake, 1995). The phenomenon of interest in this study is professional learning: the professional learning needs teachers see for themselves, and the PD from the school, district, and state levels that may support teacher needs. All names used below are pseudonyms.

Table 1
Chinese Teacher Participants

Participants	Teaching experience
An	Taught 2 years in DLI program; also taught 4 years language centers in China
Feng	Elementary education student teacher completing her practicum at school
Lanying	Taught for seven years, including several years in an international high school in China and high school in the US
Xinyi	Taught 2 years in DLI program; career changer

PARTICIPANTS AND STUDY CONTEXT

Seven Mountains School District's Chinese DLI program is the focus of our study, including Forest School, the site of the district's Chinese DLI program. Covering a rural area in Utah, Seven Mountains District and Forest School maintain student enrollments with more than 80% Caucasian students. 51% of Forest School's students are identified as economically disadvantaged, which is 20% higher than the district average. Forest School has five grade levels, each with a Chinese DLI class. All Forest School faculty members are white women aside from the five Chinese teachers. Lanying had taught at Forest School for just one year, yet she was the most experienced Chinese-language teacher; the school's other Chinese teachers had taught in schools for two years or less (see Table 1).

DATA SOURCES

This study draws from two data sources from a larger case study of professional learning within Seven Mountains District and Forest School. The first data source is interview transcripts. We conducted one 45–60-minute semi-structured interview with each participant (see Appendix A for questions). The second data source is fieldnotes from observations of classroom teaching and PD trainings at Forest School, developed using Emerson et al.'s (2011) process; teachers were observed for one hour, whereas the PD training consisted of three hours of observation. We took notes like jottings, then drafted detailed fieldnotes using a template we developed for comparison and analysis (see Appendix B for template).

DATA ANALYSIS

We began aggregating data (Stake, 1995) using initial coding of the teachers' interviews (Saldaña, 2016). First, we coded felt needs, which included statements reflecting knowledge and/or skills DLI teachers identified as essential to their teaching practice (c.f., Berwick, 1989). Second, we coded for PD supports, including any feedback, coaching, training, or other initiative or action intended to help engage or meet teachers' professional learning needs. We coded interviews in segments, checking for reliability after each round until we achieved a 0.8 kappa as computed by NVivo 12. After achieving reliability, we began our second cycle of coding, which included descriptive and process coding (Saldaña, 2016) to analyze and decompose the main codes of felt needs and supports. We used the coding scheme developed with teacher interviews to code fieldnotes from classroom and PD observations; we also coded perceived needs, which included statements by other educators reflecting knowledge and/or skills DLI teachers should have. In line with complexity theory, we also subcoded providers and locations of PD supports identified in interviews and fieldnotes to analyze PD overlap and emphases. Our findings are shared below.

FINDINGS

FOLLOWING THE UTAH DLI MODEL

The four Chinese DLI teachers in this study reported needs that were greatly impacted by the Utah DLI model, including the curriculum and apps that the model requires. Participants found the Utah model's target language requirement challenging, particularly requirements that forbid teachers from using English with students during class time. All teachers noted the importance of being expressive with students to help students to better understand Chinese vocabulary and its meaning. For example, An and Lanying provided examples of using "drama" and "acting and singing and dancing" while teaching students in Chinese. Feng also recalled how she had to adjust her vocabulary, using simpler words students were familiar with in Chinese. Another challenge the model created is Chinese teachers also needed to follow the apps required by the model. Apps like Mandarin Matrix and Level Learning were used extensively in the DLI classrooms. An recalled receiving "some training for the app[s], maybe, you know, the Lexia [a literacy app]." However, teachers did not receive consistent training during the school year. Chinese teachers did receive training like the AUDII inservice training at the beginning of the year that emphasized the model itself, but this training focused on curriculum and apps. Chinese DLI teachers were expected by the state and school to learn and to implement the DLI teaching model with fidelity.

BUILDING RELATIONSHIPS AND COMMUNICATING WITH STUDENTS

The DLI model restricts Chinese teachers' communication with students even as school and district PD focus on building relationships with students. Although classroom and behavior management were frequently identified needs, Chinese teachers generally felt well supported to negotiate classroom and behavior issues. Forest School provided different PD trainings for teachers on relationships and behavior management; behavior coaches also were available to support students and teachers. Teachers like Lanying felt that the PD and trainings helped teachers to "think about the reason behind [behavioral issues]" rather than only "seeing the phenomenon." However, students sometimes demonstrated challenging classroom behaviors that were difficult for teachers to contend with in students' second language. Participants believed building relationships was important, yet the DLI requirements and the model were at times in conflict with the school's PD programming.

Throughout a series of trainings on a designated PD day, the emphasis was clearly on supporting students in a variety of ways by building positive relationships and better understanding how to intervene and communicate with students when needed. When we arrived at the school, teachers were participating in a community circle, which appeared to be "an effort to model the way the circle worked, and how it could be used with elementary-aged children" (R1, 3/11/2022). Before starting a video entitled "Creating Relationships," the principal asked teachers, "Why is [creating relationships] important?" (R2, 3/11/2022). The video outlined various engagement strategies to build relationships and interact with students. A third training later in the day focused on behavior, yet communicating with students was ever-present in the presentation. The PD facilitator, a university faculty member, discussed different phases of student behavior, such as the calm phase when a student "is cooperative and able to learn and to accept…feedback" (R2, 3/11/2022). Though these trainings were not inconsistent with the DLI model, the challenges of creating relationships and managing behavior with students in their second language were not addressed—or even mentioned—in the trainings.

Collaborating with Others and Learning through Observations

For Chinese DLI teachers, collaboration is essential to communicate with partner teachers per the DLI model's requirements, but also because they must consistently work together with other teachers in the school to improve general and Chinese teaching strategies for the DLI classroom. Collaboration with English-language partner teachers was frequently cited as an important partnership. Chinese teachers also were a resource. "[W]e have five teachers," Lanying said of Forest School's DLI program. The five teachers were able to discuss "[w]hat kind of strategies works really good" for other Chinese teachers, as well as the strengths of students in writing, listening, or other aspects of language use. Chinese teachers, supported by the state's DLI program director, connected with DLI teachers beyond their home school as well. An described how "we share a kind of chat group divided by different grade level," which was used by teachers to seek help and ask questions. Participants also observed other teachers' classes, and were observed by others, to learn from/about teaching practice.

Teaching in/about Chinese

Teaching in/about Chinese is a series of important needs created by the DLI model, yet not well supported at Forest School. Finding and adapting resources and translating content into Chinese to help students better understand Chinese language and content are specific knowledge or skills required of Chinese DLI teachers. Understanding the differences between Chinese and American education also is an essential need for Chinese teachers. Lanying mentioned that teaching is usually teacher-centered in China whereas in the US it is student-centered. Teaching culture is also an important need for learning a second language, but participants reported having limited opportunities to teach about Chinese culture. Communication skills such as awareness of accents and dialects (e.g., the standard Mandarin dialect), knowledge of Pinyin (i.e., a Romanization of the Chinese written language), as well as knowledge of students' emerging Chinese vocabulary were all identified as essential knowledge for Chinese DLI teachers. School-based supports targeted general needs such as providing behavior or classroom management training, but specific needs related to teaching in/about Chinese were left to the state to address.

Discussion and Implications

Skills like translating and adapting resources into Chinese and differentiating content provide a greater perspective on the specific knowledge and skills for Chinese teachers. Building on the work of Sung and Tsai (2019) and Everson (2016), we found that Chinese teachers' needs are not well addressed through teacher professional development. This finding is important because Chinese language programs have for years suffered from shortages of qualified teachers (Peng, 2016), a phenomenon possibly exacerbated by schools' and other professional development providers' failures to meet Chinese teachers' particular needs. Chinese teachers, like other educators (c.f., Opfer & Pedder, 2011), received a range of general supports such as trauma and behavior and classroom management training, but did not receive supports specific to their Chinese teaching responsibilities, a finding that is consistent with research on the differentiation of teacher professional development (e.g., Grierson & Woloshyn, 2013; Hendrick, 2005; Tomlinson, 2005). In this study, we only studied one school and district's DLI program. There is much more to learn about Chinese DLI teachers' needs and supports, which would necessitate research on other schools, districts, and DLI programs.

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APPENDIX A

Interview Questions

1. Tell us a little bit about yourself. How long have you been teaching? How long have you been teaching at Forest School?
2. How did you come to find out about dual language immersion programs? Opportunities here in Utah?
3. Tell us what your classroom is like. What are your students like?
   Follow-Up: Is your classroom or your students similar or different to what you were expecting when you started this job?
4. What is your favorite aspect or part of being a DLI teacher?
5. What is the most difficult part of being a DLI teacher? Is there a particular day or event or type of activity that stands out?
6. What do you see yourself as good at as a teacher?
7. What do you think are some areas for improvement as a teacher?
8. What is one thing you really wish you had or could do as a DLI teacher and what is one thing you have to do as a DLI teacher that you do not want to do? Can you describe what this looks like in your practice/classroom?
9. Who provides you with feedback or coaching (or other types of help or support) on your teaching?
10. What is the best feedback or coaching you've received while working in the DLI program at Forest School? Can you give us an example?
    Follow-Up: Why does this feedback/coaching stand out to you?
11. Is there anyone else who helps or supports you one-on-one? A fellow teacher? A coach? Etc.?
12. What kinds of words or expressions do you use to describe PD at Forest School?
13. What support or PD have you as a teacher received? Follow-Up: Do you think they are useful for your teaching?
14. What happens on inservice or PD days? Give us an example of a memorable (and perhaps effective) activity or seminar.

15. Let's say that you are appointed the "LEADER OF TEACHER TRAINING" for a day. What would an inservice day look like? What kinds of training or supports would you arrange for you and your peers?
    Follow-Up: [What kinds of training or supports would you arrange for you and your peers?]
    Follow-Up: Why do you think these needs are important to you?

APPENDIX B

Observational Template

Field Note ID:
Date of Observation:
Time/Length of Observation:

Event Title or Type and Lead-up:

Meeting Space and Physical Arrangement:

Participants:

Outline and Narrative description:

Before/after event:

After the Event (in-person only):

Miscellaneous notes: