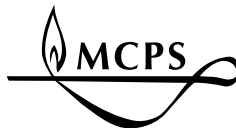# Formative Evaluation of the Two-Way Immersion Program in Montgomery County Public Schools

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Executive Summary

The Office of Shared Accountability (OSA) conducted a formative evaluation of the Two-Way Immersion (TWI) program in Montgomery County Public Schools (MCPS) during the 2018–2019 school year at the request of the superintendent of schools. MCPS implemented the TWI program at five elementary schools in kindergarten through Grade 2. Per the MCPS Two-Way Language Immersion website (MCPS, 2019), "while individual schools' models vary in scheduling, all programs follow a 50/50 model, indicating that 50% of the instruction is delivered in each program language." The TWI program is for all students enrolled at these schools and in the implemented grades.

MCPS began implementing TWI in three elementary schools during 2017–2018. These schools were Brown Station (KG), Kemp Mill (KG and Grade 1) and Washington Grove (KG) elementary schools. The program began moving upward through the grade levels and expanded to two more schools, bringing the total to five elementary schools implementing TWI during the 2018–2019 school year. The five schools implementing TWI in 2018–2019 were: Brown Station (Grades K-1), Kemp Mill (Grades K-2), Washington Grove (Grades K-1), Rolling Terrace (Grades K-1), and Oakland Terrace (K) elementary schools.

TWI is an educational model of dual language in which students develop high levels of speaking, reading, writing, and listening in English and in Spanish (or another non-English language). The uniqueness of TWI is that ideally, classes comprise a fairly equal balance of native English-speaking students and native Spanish-speaking students and the two groups of students are integrated for all or most of the school day (CAL, 2009b). Native speakers of each language serve as fluent peer models and help each other learn through a second language.

The purpose of this formative study is to provide stakeholders with programmatic feedback on how the TWI program is being implemented and staff experiences with the program. The scope of this study focuses on Kindergarten and Grade 1 implementation in 2018–2019.

Summary of Methodology

This evaluation used a non-experimental design to describe program implementation and staff experiences in the TWI program. Multiple methods of data collection were used including:

- Interviews with the Staff Development Specialist or Reading Specialist at all five schools
- Classroom observations from 29 (out of 45) K–1 classes during February– March, 2019
- Online survey from 31 (of 44) classroom teachers from May 7 to June 3, 2019
- Interviews with all five TWI school principals during April 8–12, 2019

The survey questionnaire and observation and interview protocols were all developed by OSA in collaboration with program staff in the Office of Curriculum and Instructional Programs. *The Guiding Principles of Dual Language Education* (Howard et. al, 2018) was used for guidance in developing the instruments.

Summary of Findings

The following summaries are organized by this study's evaluation questions.

Question 1. What are the characteristics of the schools implementing TWI?

TWI schools typically had a student enrollment near 500; however, one school (Rolling Terrace Elementary School) had a much larger enrollment of 892 students. Three of the five TWI schools were Title I schools' in 2018–2019 and the other two were MCPS focus schools[1]. The percentage of Black or African American students was about 25% or less. The percentage of Hispanic students varied across the schools from 35% to 77%. Three of the five schools had just over 50% of its student population receiving English for Speakers of Other Languages (ESOL) services while the other two had 32% and 13% receiving ESOL services. Finally, all but one of the schools had more than two-thirds of their students receiving Free and Reduced-price Meals System (FARMS) services (67% –79%) and one school had one-third of its students receiving FARMS services.

Question 2. What processes and structures were used by central office and schools to support the implementation of TWI?

TWI teachers were supported through a variety of professional development (PD) delivered by Dr. José Medina: Educational Solutions LLC (the consultant) during 2018–2019. This included: a) a two-day summer session for experienced and new teachers and Spanish teachers; b) one-on-one coaching sessions for up to seven to eight teachers per school each marking period; and c) quarterly planning sessions with all TWI teachers by grade level. Additionally, the C6 Instructional Framework (Medina, 2019a), was provided to TWI staff as a planning resource. Within the schools, there was: a) school-level grade-level team planning, b) language-alike teacher planning, and c) planning between the paired teacher partners. The structure of planning varied across schools; however, grade-level planning usually occurred once a week and focused more on objectives of the upcoming week's lessons. Staff reported that planning is important to assure that students are receiving continuous, but not repeated, instruction in each language and that concepts build on each other. Almost all teachers reported that they communicate with other teachers about instruction or student achievement either three or more times a week, or one to two times a week. The number of ESOL teachers and the school's ESOL instructional model for providing support to TWI varied by school; two of the schools elected to not allocate an ESOL teacher to support their Spanish speaking TWI students.

Question 3. To what extent was TWI implemented in the schools and classrooms?

Instructional Schedules. All five schools delivered content instruction in both languages and strove for a 50/50 division of instruction, although the approach for scheduling varied across the schools. In four of the five schools, students received their daily instruction as one-half day in Spanish and one-half day in English. In one of the five schools, students alternated their language of instruction weekly. English and Spanish teachers were paired as instructional partners in all schools and in some of the schools, there was a single model class taught by a bilingual teacher. In all five schools,

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[1] A focus school is defined as a school that does *not meet* the level of poverty for Title I designation, but has a high percentage of students receiving FARMS services.

English Language Arts (ELA) and math were taught in both English and Spanish. In three of the five schools, the time allocated for each content area (ELA, math, social studies and science), alternated each week by language. Most specials were taught in English only across the five schools; however, two schools offered art, and one school offered physical education, in Spanish or both languages. Teachers also implemented bridging activities (i.e. bringing a Spanish and English class together for translanguaging); just under three fourths of teacher survey respondents reported that they implemented a bridging activity once a month or every two weeks. Although four of the schools implemented a 50/50 instructional model using one half day for each language, students may receive uneven amounts of instructional time in each language due to challenges with scheduling and interruptions that may occur in the afternoons. Two schools reported alternating students' morning and afternoon schedules each marking period or semester.

Classroom Observations. Teachers in all of the observed classes (*N*=29), spoke in the language of instruction all or most of the time Almost all of the classroom observation look-fors designated for this study were observed. These included: classroom artifacts in the language of instruction; bilingual artifacts, such as class-created anchor charts and cognate posters; opportunities for student sustained language use (mostly observed with teachers); reference to language domains during instruction; instructional strategies such as use of visual and nonverbal gestures, connections, building background knowledge, use of language frames, using deliberate speech, check for understanding; and use of technology by both teachers and students.

Areas that were not observed as frequently were: purposeful student groupings and collaborative tasks among students (versus individual tasks while in a group seating arrangement); cross-cultural awareness during instruction; hands-on physical use of 4+1 visual cards; and songs and chants. These areas may need to be examined as to whether more focus would be beneficial and appropriate for this age group (i.e. Kindergarten and Grade 1).

Question 4. What were the experiences and perceptions of teachers with regard to delivery of the TWI program, including professional development and support?

Most of the 31 teacher respondents (84%) were in their first year of teaching in the TWI program. Most responding teachers reported that they can articulate the advantages of an additive bilingual program, are knowledgeable about the three program goals, feel comfortable implementing the program, and believe their administrator is supportive of the program. Over half of the respondents agreed they had adequate PD to teach the TWI program (61%), and they had adequate materials to effectively teach in the [teacher's] language of instruction (58%). Of the teachers who reported there were inadequate materials to effectively teach in the language of instruction, most were Spanish or bilingual teachers. They further explained that they have to create or translate materials in Spanish and that they need a curriculum, materials and books in Spanish (from a bilingual, not monolinguist, lens). Additionally, less than one third of responding teachers agreed that Dual language/TWI is a whole school culture at [their] school.

Most all responding teachers reported that the one-on-one coaching, PD during the quarterly planning meetings, and collaboration with other TWI teachers was extremely useful or useful. Teachers also conveyed in response to an open-ended question that they would like more PD to include teaching Reading, Writing, and Literacy in Spanish, including scope and sequence of lessons. A vast majority of teachers reported the following were working well: bridging activities,

assessing student progress in English, planning instruction, and collaboration for instructional planning. Teachers also reported, in response to an open-ended question, the following aspects which worked well: staff commitment/teamwork/excitement, student growth, connecting two languages, increased student engagement/confidence and learning the culture/value of other languages. When asked how TWI has changed their instruction, some teachers reported that it has changed their mindset about learning a language (positively); their understanding of language acquisition and strategies; and their need to allocate time and prioritize.

Although just over one half of teachers reported that the instructional schedule is working extremely well or very well, 41% reported that it is not going well. Teachers explained that this is mainly because there is not a true 50/50 division of content time between the languages. Over 80% of teacher respondents reported that assessing student progress in Spanish and delivering the MCPS curriculum in Spanish was not working well. Further, teachers reported the following implementation challenges and suggestions: need a Spanish curriculum and related materials; too much testing and testing is not equal between languages; need additional PD (especially in Spanish literacy and foundational skills); need additional classroom support (e.g. reading specialist/special education); overwhelmed/too many initiatives; and need more district support/guidance.

Question 5. What were the experiences and perceptions of school administrators with regard to delivery of the TWI program?

Most of the principals reported that they were very knowledgeable with the concepts of dual language and TWI, and that they have received great PD and support from the consultant and the MCPS program staff. However, there is still a need for more PD and collaboration among the TWI administrators, specifically about the implementation of the program so that they can make more informed leadership decisions; some principals reported that there was a lot of figuring it out as they go. Principals reported that the one-on-one teacher coaching sessions were especially valuable and that the quarterly teacher training was helpful. Some schools were able to use extra funding to support the implementation of TWI (e.g. materials, PD, planning time), but concern was also expressed about future funding.

All of the principals reported they see the program's success reflected in the students, especially with increased student engagement and confidence levels among Spanish speaking students. Some also reported that parent interest and involvement has increased and teachers are excited and feel empowered. Two of the principals conveyed that the school culture has changed (e.g. how they approach morning announcements and support families). At the same time, some principals also reported challenges with community concerns; principals spend a lot of time selling and explaining the TWI program and its implementation.

The three primary areas of challenge reported by the principals were: a) staffing (hiring qualified bilingual teachers and specialists), b) lack of Spanish curriculum/materials/assessments, and c) need for more direction and guidance, and upfront planning. Other challenges reported by one or two principals were: implementing interventions in Spanish, addressing enrollment of students into the program, managing the program along with other school priorities, and addressing the articulation of students after elementary school.

In conclusion, the TWI schools varied in school characteristics, staffing and approaches to scheduling. Almost all of the look-fors designated for the classroom observations were observed, with a few areas not observed as frequently. Positive experiences with implementing TWI were reported such as staff excitement and commitment, increased student confidence, school culture, and PD. However, several areas of need and challenges were consistently reported such as: the lack of curriculum, materials, and assessments in Spanish; the distribution of testing between teachers; challenges with implementing a true 50/50 model; PD on Spanish reading and literacy; PD and collaboration for administrators; and hiring qualified bilingual staff.

Abbreviated Recommendations

The following are recommendations resulting from the study's findings. For brevity, some of these recommendations are shortened; the full recommendations can be found in the report.

Systemwide Implementation
1. Examine areas where it might be beneficial to systemize implementation across the schools (e.g. schedule structure, utilization of ESOL teachers).
2. Support school leadership in obtaining an equal distribution of daily language instruction.
3. Consider eliminating the single model classroom in order to have an equal distribution of paired Spanish and English teachers in each school; staff feedback reported that having a single model approach is challenging.
4. Strengthen support provided to school administration in terms of clear messaging about implementation for teacher and parents.
5. Examine the number of assessments given to students in the TWI program. Also examine the balance of assessment responsibilities between the Spanish and English teachers.

Curriculum, Assessments, and Resources
6. Assure that there is an authentic Spanish curriculum, and related scope and sequence that comes from a bilingual, not a monolingual, lens.
7. Seek ways for schools to obtain more materials in Spanish, reducing the amount that staff need to create. This includes more books in Spanish for classroom instruction, classroom independent reading, and the media center.
8. Assure that there are multiple measurements for assessing student progress in Spanish keeping in mind the limitations in assessment time as mandated by the Maryland General Assembly.[2]
9. Establish clear communication to school staff about assessment availability, scheduling and expectations.

Professional Development and Support
10. Provide additional PD and resources on Spanish literacy and reading for the applicable grade levels.
11. Provide separate PD opportunities for the TWI administrators and increase opportunities for communication and collaboration among the TWI administrators.

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[2] The *More Learning, Less Testing Act of 2017*, H.B. 461 was enacted by the Maryland General Assembly and stipulates that that amount of time in schools that can be devoted to federal, state or local mandated assessments will be no more than 2.2% of the minimum required instructional hours.

12. Seek opportunities for TWI administrators to network with dual language experts and other districts implementing dual language programs (e.g. conferences, meetings, work groups, etc.)
13. Examine ways to provide more staff planning time, or protect existing planning time.
14. Continue to seek and increase methods in which staff across schools can share their materials, tips, and resources.

Staffing
15. Increase efforts to hire bilingual classroom teachers, teachers for specials, and supporting staff, while taking into account the schools' future staffing needs as TWI is rolled out to the next grade levels.

Reinforcing Instruction Delivery
16. Increase ways in which students work together (as appropriate for the grade level), such as collaborative tasks within learning centers or paired work.
17. Increase student choice (appropriate for grade level) in order to build independence and ownership of the learning process.
18. Communicate expectations for modeling the language of instruction, including when it's suitable to make bilingual connections.

Formative Evaluation of the Two-Way Immersion Program

The Office of Shared Accountability (OSA) conducted a formative evaluation of the Two-Way Immersion (TWI) program in Montgomery County Public Schools (MCPS) during the 2018–2019 school year at the request of the chief academic officer. MCPS implemented the TWI program at five elementary schools in 2018–2019 in Kindergarten through Grade 2 depending on which year implementation began.

Background

Overview

In January 2015 the MCPS Board of Education commissioned Metis Associates to conduct a comprehensive study of the variety of choices and other special academic programs offered at MCPS (MCPS 2016). One of the recommendations from that report was to establish a systemic approach to dual language programs, starting at the elementary level, and to consider programs in Spanish, as well as other critical need languages. The report pointed out the gaining popularity of dual language immersion programs in the U.S., and related research which has shown positive impacts on student academic achievement as well as social benefits (Metis 2016).

The Center for Applied Linguistics (CAL) defines the term dual language as:

> A program in which the language goals are full bilingualism and biliteracy in English and a partner language, students study language arts and other academic content (math, science, social studies, arts) in both languages over the course of the program, the partner language is used for at least 50% of instruction at all grades, and the program lasts at least 5 years (preferably K-12) (CALa, 2019).

Figure 1 illustrates the three pillars, or goals, of dual language: 1) Bilingualism and biliteracy; 2) high academic achievement in both program languages, and 3) sociocultural competence (Medina, 2017; Kennedy and Medina, 2017, Howard et. al., 2018).

Figure 1. Three Pillars of Dual Language (Medina, 2017).

CAL has published the *Guiding Principles for Dual Language Education*, which is the most commonly used resource by school districts across the country as a tool and reference for "ongoing planning, self-reflection, and improvement" (Howard et al., 2018). The Guide centers around seven strands, each containing three to five guiding principles, which can be seen in *The Guiding Principles at a Glance* (Figure 2). "The goal is for each strand to be comprehensive in its own right, allowing a program to work with all principles, a select strand, or a groups of stands at one time." (Howard et al., 2018). Each principle consists of several key points (not shown in this diagram).

STRAND 1	PROGRAM STRUCTURE
Principle 1	All aspects of the program work together to achieve the three core goals of dual language education: grade-level academic achievement, bilingualism and biliteracy, and sociocultural competence.
Principle 2	The program ensures equity for all groups.
Principle 3	The program has strong, effective, and knowledgeable leadership.
Principle 4	An effective process is in place for continual program-planning, implementation, and evaluation.
STRAND 2	**CURRICULUM**
Principle 1	The program has a process for developing and revising a high-quality curriculum.
Principle 2	The curriculum is standards-based and promotes attainment of the three core goals of dual language education.
Principle 3	The curriculum effectively integrates technology to deepen and enhance learning.
STRAND 3	**INSTRUCTION**
Principle 1	Instructional methods are derived from research-based principles of dual language education and ensure fidelity to the model.
Principle 2	Instructional strategies support the attainment of the three core goals of dual language education.
Principle 3	Instruction is student-centered.
Principle 4	Instructional staff effectively integrate technology to deepen and enhance the learning process.
STRAND 4	**ASSESSMENT & ACCOUNTABILITY**
Principle 1	The program creates and maintains an infrastructure that supports an assessment and accountability process.
Principle 2	Student assessment is aligned with program goals and with state content and language standards, and the results are used to guide and inform instruction.
Principle 3	Using multiple measures in both languages of instruction, the program collects and analyzes a variety of data that are used for program accountability, program evaluation, and program improvement.
Principle 4	Student progress toward program goals and state achievement objectives is systematically measured and reported.
Principle 5	The program communicates with appropriate stakeholders about program outcomes.
STRAND 5	**STAFF QUALITY & PROFESSIONAL DEVELOPMENT**
Principle 1	The program recruits and retains high-quality dual language staff.
Principle 2	The program provides high-quality professional development that is tailored to the needs of dual language educators and support staff.
Principle 3	The program collaborates with other groups and institutions to ensure staff quality.
STRAND 6	**FAMILY & COMMUNITY**
Principle 1	The program has a responsive infrastructure for positive, active, and ongoing relations with students' families and the community.
Principle 2	The program promotes family and community engagement and advocacy through outreach activities and support services that are aligned with the three core goals of dual language education.
Principle 3	The program views and involves families and community members as strategic partners.
STRAND 7	**SUPPORT & RESOURCES**
Principle 1	The program is supported by all key stakeholders.
Principle 2	The program is equitably and adequately funded to meet program goals.
Principle 3	The program advocates for support.

Figure 2. Guiding Principles at a Glance (Howard et. al., 2018).

TWI is an educational model of dual language in which students develop high levels of speaking, reading, writing, and listening in English and in Spanish (or another non-English language). The uniqueness of TWI is that ideally, TWI classes are comprised of a fairly equal balance of native English-speaking students and native Spanish-speaking students and the two groups of students are integrated for all or most of the school day (CAL[b]). Native speakers of each language serve as fluent peer models of the language and help each other learn through a second language. CAL defines TWI as:

> A dual language program in which both native English speakers and native speakers of the partner language are enrolled, with neither group making up more than two-thirds of the student population (CAL[a]).

Effective two-way dual language programs provide (Thomas & Collier, 2003):
- A minimum of six years of bilingual instruction;
- A focus on the core academic curriculum rather than a watered-down version
- High-quality language arts instruction in both languages, integrated into thematic units
- Separation of the two languages for instruction (no translation, no repeated lessons in the other language)
- Use of the non-English language for at least 50 percent of the instructional time
- An additive (adding a new language at no cost to students' first language) bilingual environment that has full support of school administrators, teachers and parents
- Promotion of positive interdependence among peers and between teachers and students
- High quality instructional personnel, proficient in the language of instruction
- Active parent-school partnerships

TWI Program Description in MCPS

MCPS implemented a dual language program (TWI) in three of its elementary schools in 2017–2018 and expanded to two more schools in 2018–2019. The initial implementation of TWI starts in Kindergarten and will roll upward throughout the grades during subsequent years until all classrooms at all grade levels in these schools follow the TWI model (Appendix A; MCPS 2018).

Program structure. The three core goals of dual language--bilingualism and biliteracy; high academic achievement in both languages; and sociocultural competence—guide the program in MCPS (Appendix A). Per the MCPS Two-Way Language Immersion website (MCPS, 2019), MCPS utilizes a 50/50 program model, using the English and partner language each for 50% of instruction at all grade levels.

Curriculum and instruction. Teachers deliver the same academic content and standards as traditional classroom teachers, while providing instruction in two languages. At MCPS, typically the students receive lessons from two teachers--one providing academic instruction in English, and the other providing academic instruction in Spanish. Spanish teachers are native or near-native speakers of the target language (Appendix A; MCPS, 2018.) In 2018-2019, instruction was provided using the MCPS 2.0 Curriculum.

While there is to be separation of languages for instruction in the TWI program, literature also has shown that comparing and contrasting in the two languages can be positive and promote the transfer of skills and the development of multi-linguistic awareness. A common strategic approach for providing this opportunity is Bridging. According to Kennedy & Medina (2017), bridging is a targeted activity which

> "encourages students to connect the content across the two program languages, compare and contrast linguistic features, and apply content recently learned in one language engagement in enrichment activities in the other language."

Professional development, support and resources. Professional Development (PD) is one of the major dimensions for program design and implementation of a Dual Language program (Strand 5 of the *Guiding Principles for Dual Language Education*). According to the guide, teachers should be trained on the dual educational model and biliteracy development as well as adopt a deep understanding of how to provide authentic primary instruction in the partner language. Specifically, "essential training – that is training, important for any teacher – should cover educational pedagogy, equity pedagogy, standards-based teaching, literacy instruction, sheltered instruction, high standards for all students, and parental and community involvement." (Howard, 2018, p. 93).

TWI teachers were supported through a variety of professional learning opportunities delivered by Dr. José Medina: Educational Solutions LLC, referred to as the consultant from this point forward. This PD included a two day summer session for experienced and new teachers and Spanish teachers, one-on-one coaching sessions for teachers each marking period, and quarterly planning sessions with all TWI teachers by grade level.

Additionally, the *C6 Biliteracy Instruction Framework* (Medina, 2019a) was developed to organize the principles of dual language and support schools with their professional learning (Figure 3). It is a "lesson planning framework that captures best practices and recommendations to serve emergent bilingual students and makes it easy for a teacher to plan in dual language programs…It directly aligns with the guiding principles and three goals." (Medina, 2019b). He stated that the C6 framework is not to plan for the transfer of a students' language into English; in dual language the entire language repertoire of each student is valued. Also emphasized is the third goal, Social Cultural Competence, which, according to Dr. Medina, has been ignored for a long time but is embedded in the newly released (2019a) C6 framework.
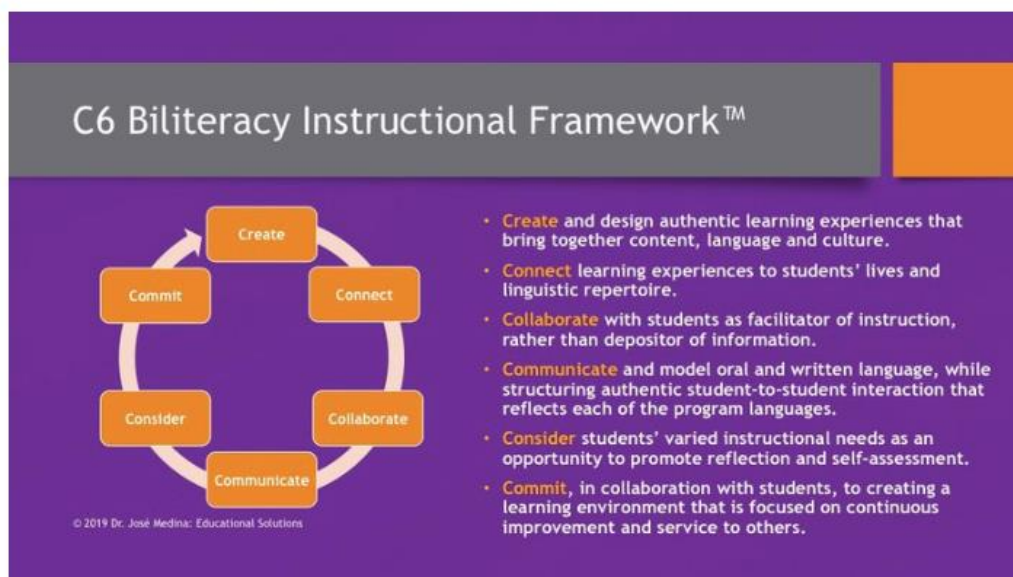
Figure 3. C6 Biliteracy Instructional Framework (Medina, 2019a).

Student Enrollment. All students enrolled at the five MCPS TWI schools who were in the grades implementing TWI were enrolled in the program. Those students will continue in TWI as the program is rolled out in subsequent grades.

Literature recommends that English-speaking students should not enroll in a TWI program past Grade 1 because proficiency in the second language is needed to keep up with grade-level work that is cognitively more demanding and students will not have had the experience of acquiring the language in early years (Thomas, 2012). Therefore, new Grade 2–5 MCPS students, whose primary language is English, and whose home school is a designated TWI school, are encouraged to enroll at a nearby designated "sister" school. However, those students are still permitted to enroll at their home school if they prefer. MCPS leadership continues to revisit this aspect of implementation, particularly as they move towards Grade 2 implementation in the TWI schools.

School and Grade Selection

The TWI schools were selected by a collaboration between school leadership and the Office of Curriculum and Instructional Programs (OCIP). Schools were selected because of the high percentage of native Spanish speakers enrolled in the school, the need to raise student achievement, and/or the capacity at the school to undertake the new initiative.

In interviews with TWI school principals, most principals confirmed that the reasons leading to the decision to implement TWI at their school was that their community population has a high percentage of Latino and native-Spanish speakers. One school was already implementing a dual language program in some classes at each grade level (a strand model); the principal explained that they wanted to bring continuity and implementation of the program to all students at the school. Another school was already implementing a Spanish immersion program (students chosen by a county lottery system) in some classes at each grade level. Additionally, one of the TWI principals reported that a parent group started the idea of the initiative. In another TWI school,

there is not a high percentage of native-Spanish speakers, but school administrators wanted to provide students with a great resource and the benefits of a dual language program in their own home school.

Table 1 shows the year of TWI implementation and the grade levels that implemented TWI in school year 2018–2019. Two of the five schools implemented TWI for the first time in 2018–2019; implementation was in Kindergarten only at Oakland Terrace Elementary School, and Kindergarten and Grade 1 at Rolling Terrace Elementary School (Table 1). Two schools, (Brown Station and Washington Grove elementary schools), implemented the TWI program for the first time in 2017–2018 for all Kindergarten classrooms and rolled up the program to Grade 1 in 2018–2019. The third school, Kemp Mill Elementary School, implemented TWI in all their Kindergarten classrooms in 2016–2017, all Kindergarten –Grade 1 classrooms in 2017–2018, and all Kindergarten Grade 2 in 2018–2019. Kemp Mill has implemented a Dual Language program since 2001. This program was a strand model, where 50 percent or more of the K–5 classrooms participated; students were at their home school. Rolling Terrace Elementary School has implemented a partial One-Way Spanish immersion program since 1985 using a countywide lottery selection system. The partial One-Way immersion program is being phased out and is now no longer part of the lottery system.

Table 1
TWI Implementation During 2018–2019 School Year

2018–19	Oakland Terrace	Rolling Terrace[a]	Brown Station	Washington Grove	Kemp Mill[b]
Year of Implementation	Year 1	Year 1	Year 2	Year 2	Year 3
Grade Levels Implementing	KG	KG, 1st	KG, 1st	KG, 1st	KG, 1st, 2nd

[a]Some classes in Grades 2-5 continued to implement an existing One-Way Spanish Immersion program
[b]Some classes in Grades 3-5 continued to implement an existing Dual Language program

Scope of the Formative Evaluation

The purpose of this formative study is to provide stakeholders with information to better understand how the TWI program is being implemented in five elementary schools. The study aims to provide programmatic feedback through the examination of staff experiences with implementing the TWI program as well as student and school characteristics. The scope of the study focuses on Kindergarten–Grade 1 implementation in 2018–2019; although one school also implemented TWI in Grade 2 in 2018–2019 and one school only implemented TWI in Kindergarten in 2018–2019.

The following questions guided the program evaluation:
1. What are the characteristics of the schools implementing TWI and their students?
    a. What is the enrollment size, demographics and services received by students?
    b. What is the percentage of students with each primary language (Spanish and English), and the percentage of students at each ESOL level?

2. What processes and structures were used by central office and schools to support the implementation of TWI?
   a. What professional development was provided and what proportion of teachers and other staff participated in professional development?
   b. What other ongoing support was provided?
3. To what extent was TWI implemented in the schools and classrooms?
   a. In what subjects was TWI implemented in each school and what was the instructional schedule and format used by TWI classrooms? How did this compare to any recommended instructional schedule and format?
   b. What were the instructional materials and strategies used in the TWI classrooms and how did they compare to recommended instructional materials and strategies?
4. What were the experiences and perceptions of teachers with regard to delivery of the TWI program, including professional development and support?
5. What were the experiences and perceptions of school administrators with regard to delivery of the TWI program?

Review of Selected Literature

Evaluations of Dual Language Programs

There has been a considerable amount of research on the dual language model's impact on student achievement, and much of the research has been done by the team of Virginia P. Collier and Wayne P. Thomas of George Mason University. Collier and Thomas have analyzed and published 32 years of longitudinal research across 36 school districts in 16 states throughout the country. Their research focuses on following students at a minimum of 3–5 years because, they say, "effects are small within a school year but cumulatively larger and significant over time" (Collier & Thomas, 2017a). In their study at the Houston, Texas school district, they reported that students who were native-Spanish speakers in the two-way dual language schools, were at or above grade level for reading in both English and Spanish in Grades 1–5. In English achievement, English Language Learners (ELLs) in the two-way classes outscored ELLs in the other two bilingual programs (transitional and developmental one-way) at all grade levels (Collier & Thomas, 2004). They also conducted a study in two school districts in Maine, which implemented a dual language program in French and English and found that after four years, ELLs who were at the 31st percentile on the English Terra Nova, reached the 72nd percentile, which is above grade level. The authors stated that after following students over time in these two studies, "both one-way and two-way bilingual programs lead to grade-level and above-grade-level achievement in second language, the only programs that fully close the gap" (Collier & Thomas, 2004).

Collier and Thomas also followed students in seven North Carolina school districts with English and Spanish dual language programs. The authors found what they described as "astounding" effect sizes; a phrase also used in a chapter title highlighting these findings (Collier and Thomas, 2009). In this body of research, the authors found that all groups, including ELLs and especially African Americans, benefited greatly from the dual language program. When second-year results were compared to first-year results in a cross-sectional analysis, the results were similar. However, when the same students were followed farther, English learners and FARMS African American students in dual language scored higher in reading than the comparison groups without dual

language. Additionally, students of all backgrounds in dual language outscored the non-dual language students in math. It is worthy to note that the dual language schools had the program for at least four years, parents chose to enroll their students, and the study found the program to be well implemented, supported, and focused on fidelity (Collier and Thomas, 2009). After three years of analysis, the North Carolina study found that all groups of students who attended a dual language program, regardless of ethnicity, socioeconomic status, LEP, or special education status, outperformed their peers in math and reading (Collier and Thomas, 2009). The authors concluded that "all groups of students benefit greatly from dual language programs. English learners and African American students especially strongly benefited." (Collier and Thomas, 2009)

Collier and Thomas also reported in their book *Dual Language Education for a Transformed World* (2012, p.3-5) that their research has revealed that "dual language programs have a positive influence on all those who participate in or interact with the education system." These include parents, administrators, teachers, and students.

- *Parents*. The authors state that as parents grow and understand the program, they frequently become the program's greatest advocates. And that historically high mobility rates that are common in low-income neighborhoods, are lowered as they increasingly value their dual language school and find ways to stay.
- *Administrators*. Principals of well-implemented programs love what they do and stay in their positions for many years. Collier and Thomas acknowledge that the first year's implementation is challenging, as with any new program, and therefore, the principal must deeply understand the program, and build parent and teacher support, including intensive staff development. Further, many will work with their central office to seek funds for needed materials and staff development.
- *Teachers*. Teachers are excited and proud. Those who are proficient in two languages are also bicultural and their cross-cultural experiences are incorporated into their teaching practices and shared with their students and monolingual English teachers. Further, the authors emphasize that teacher planning time is "an integral part of each school week in a dual language program." Teachers also partner with parents in the learning process and for cross-cultural experiences.
- *Students*. Thomas and Collier reported that students in dual language programs are proud, excited and confident and that students from all backgrounds have thrived. They also report that student graduates state that the program has changed their lives personally and professionally; their bilingual proficiencies make them more attractive to the workforce.

In the Collier & Thomas (2017b) study of Albuquerque, New Mexico schools, all dual language groups outscored their comparison group by race, low income, special needs or English native speaker.   In this study, the authors also point out that "proficient bilinguals outperform monolinguals in the following areas: creativity, problem solving, divergent thinking, mental flexibility, metalinguistic awareness, visual-spatial skills, and more efficient cognitive/sensory processing." They also perform better with executive functions such as attention to detail, focus, task switching, memory and conflict management.

The RAND Corporation conducted a study of dual immersion programs in Portland Oregon Public Schools; the sample consisted of students who were randomly assigned from the pool of applicants. The RAND Corporation found that students in the dual immersion programs outperformed peers

on state tests by Grade 5, and even more by Grade 8 and English learners in dual language are more likely than their peers to be classified as English proficient by Grade 6 (Steele et. al., 2017). Researchers from Northwest University found that students in the majority language (i.e. English) in a two-way immersion program outperformed their mainstream peers in Grades 3–5 math and Grade 3 reading (Marian & Shook, 2013).

There are a variety of thoughts as to the factors that influence the success of dual language programs. Marian and Shook (2013) suggest that students are more aware and have more attention on language. Collier and Thomas (2002) submit that dual language programs develop cognitive skills through lessons including greater creativity and cross-cultural context; further, the prestige of the program influences student achievement. Finally, the greater diversity in dual language programs can improve a student's sense of belonging and increase parent involvement (Kamenetz, 2016).

Measuring Student Achievement

Lindhold-Leary (2012) pointed out, as referenced in the Guiding Principles for Dual Language Education (Howard et al., 2018), concerns related to time for evaluating dual language programs that must be considered. Research indicates English learners may require five to seven years to close the gap among their peers. The author explained that one accountability problem relates to the amount of time dual language programs have to demonstrate grade-level proficiencies. Further, that evaluations of student achievement conducted in early years (Kindergarten through Grade 3) typically show students in dual language programs score below grade level or lower than comparison groups. This lack of progress can lead to administrators wanting to add more English or to eliminate the program. Lindhold-Leary advises using a data management system that tracks students over time to ensure that both English and English learner participants are making expected progress.

Additionally, Collier and Thomas stated that they, "firmly believe that the best way to conduct methodologically appropriate research on gap closure, with disaggregated groups, is to conduct longitudinal research on the same students across time rather than cross-sectional" (Collier & Thomas, 2003). Typical native English speakers make one year of achievement gain each school year; therefore, ELLs must gain more than one year's achievement every school year for consecutive years in order to catch up and close the gap (Collier & Thomas, 2012). The duo has stated, "The key to accelerated progress is for English learners to receive peer-equivalent grade-level bilingual schooling, so that they are not falling behind in cognitive and academic development" (Collier & Thomas, 2017a). The researchers also point out that they have found that it takes six to eight years for ELLs to reach grade level in the second language and that although they are making progress to close the gap, they should be tested on grade level in their first language to measure that they are keeping up cognitively (Collier & Thomas, 2003; 2017).

It is also important that dual language programs "require the use of multiple measures in both languages to assess students' progress towards meeting bilingualism and biliteracy goals as well as curricular related goals" (Howard et. al, 2018, p.74) Additionally, Howard et. al (2018) argued "it is important to note that slower development than normal in only one language probably reflects the quality and quantity of opportunities to learning that language, whereas difficulties in both

languages generally implicate underlying impairment," and therefore it is imperative to assess them in both languages (National Academies, 2017).

Methodology

Study Design

A non-experimental design using multiple methods of data collection was used to examine the implementation of TWI in MCPS. MCPS school level and student level data was used to describe the schools and participants. Data from documentations, interviews, surveys, and classroom observations were used to describe program implementation, processes and staff experiences. Table 2 shows the resources used to answer each evaluation question.

Table 2
Evaluation Question and Corresponding Data Collection and Resources

Evaluation Question	Data Collection and Resources
Q1. What are the characteristics of the schools implementing TWI?	• MCPS Data
Q2. What process and structures were used by central office and schools to support the implementation of TWI?	• Interviews with School Principals • Interviews with school SDT or Reading Specialist • Selected Teacher Survey Questions
Q3. To what extent was TWI implemented in the schools and classrooms?	• School schedules and documentations • Interviews with school SDT or Reading Specialist • Classroom observations
Q4. What were the experiences and perceptions of teachers with regard to delivery of the TWI program, including professional development and support?	• Teacher Surveys
Q5. What were the experiences and perceptions of school administrators with regard to delivery of the TWI program?	• Principal Interviews

Study Sample

All five schools that were implementing TWI during 2018–2019 were included in the study sample. Table 3 shows the number of classrooms (identified by their language of instruction) implementing TWI at each of the five schools in 2018–2019. Samples for data collection activities were chosen from this population.

Table 3
Number of Classrooms (by Language of Instruction) Implementing TWI in 2018–2019[1]

2018–2019	Oakland Terrace	Rolling Terrace	Brown Station	Washington Grove	Kemp Mill
Number of Kindergarten Classrooms (23)	2 English 2 Spanish 1 Single Model (5)	3 English 3 Spanish (6)	2 English 2 Spanish 1 Single Model (5)	1 English 1 Spanish 1 Single Model (3)	2 English 2 Spanish (4)
Number of Grade 1 Classrooms (21)		4 English 4 Spanish (8)	2 English 2 Spanish 1 Single Model (5)	2 English 2 Spanish (4)	2 English 2 Spanish (4)
Number of Grade 2 Classrooms (4)					2 English 2 Spanish (4)

[1]Number in parentheses indicates number of classes of students in grade in that school.   English teachers teach two classes of students in English per day; Spanish teachers teach two classes of students in Spanish per day; Single Model teachers teach one class of students in English (1/2 day) and Spanish (1/2 day).

Data Collection Activities

Interviews with Staff Development Teachers/Reading Specialists

Sample. An interview with the TWI point of contact at all five schools was conducted in January 2019. In two schools, the Staff Development Teacher (SDT) was interviewed; in two other schools, the Reading Specialist was interviewed; and in one school, both the SDT and Reading Specialist were interviewed simultaneously.

Instrument. The interview questions were developed by staff in the Office of Shared Accountability (OSA) in collaboration with program staff in OCIP. The primary purpose of the interview was to collect information on each school's TWI model, daily schedule and how TWI works in terms of operations at their school. The school contact interviews were also used so that the researchers could appropriately schedule classroom observations based on the school model and classroom schedule.

MCPS School and Student Data and Program Documents

Sources. School characteristic data from MCPS *Schools at a Glance* and demographic data from MCPS student records were used to describe TWI schools and students. Program documentation, such as training schedules and attendance, and school schedules were collected from program staff and school contacts.

Classroom Observations

Sample. Classroom observations included Kindergarten and Grade 1 classes across the five schools. For consistency throughout the sample, Grade 2 was not included because only one school was implementing TWI in all its Grade 2 classes in 2018–2019. Additionally, TWI was not implemented in Grade 1 at one school, so there were no Grade 1 observations at that school.

A total of 29 classroom observations were completed (out of 45 possible classrooms) (Table 4). Evaluators observed one English Language Arts class and one Spanish Language Arts class in Kindergarten and Grade 1 for one hour at each of the five schools. Additionally, a math class in English and Spanish were observed for one hour at each grade level across the five schools; due to limited resources, a smaller sample of math classes were observed. Of the 29 observations, 15 were in Kindergarten and 14 were in Grade 1; 15 were in classrooms with English instruction and 14 were in Spanish instruction. Two of the observations were in single model classrooms (i.e. the teacher taught one-half day in each language to the same classroom of students). Table 4 shows the number of classroom observations completed by grade level, language of instruction, and content. Observations were collected from February 13 to March 5, 2019.

Table 4
Number of Observations by Grade, Content and Language of Instruction

	English Language Arts	Spanish Language Arts	Math in English	Math in Spanish	Total
Kindergarten	5	5	3	2	15
Grade 1	4	4	3	3	14
Total	9	9	6	5	29

Note. Includes two single model classrooms.

Additionally, a bridging activity from four of the five schools were observed (three Grade 1 and one Kindergarten). These were a separate data collection activity from the classroom observations and were scheduled by convenience.

Instrument. Evaluators worked with the program staff to develop a protocol for classroom observations. The *Guiding Principles of Dual Language Education* (Howard et al., 2018) was used as a resource to help guide the development of the protocol items (i.e. look-fors). Specifically, selected principles and key points under Strand 3: Instruction that were feasible to observe were used. In addition, information from the teacher professional development and other dual language literature were used as guiding resources. The observers were four OSA staff members (one of whom is fluent in Spanish and English). The four observers also piloted the observation protocol in four classrooms (data from the pilot observations were not used in the report). Based on the pilot observations, the protocol was refined prior to data collection to insure valid reporting of the practices and reliable reporting across observers.

The observation protocol had multiple indicators for observers to document along with capturing supporting details and examples. Observers also documented how the class was structured during the time of the observation, such as whole group, learning centers, individual tasks, etc. Observers

contacted the teacher after the visit to ask how, and with whom, the lesson was planned, as well as other clarifying follow-up questions as needed, such as how groups of students were formed.

There was not a designed protocol for the bridging activities; observers took detailed notes describing the lessons, which were then summarized.

Teacher Surveys

Sample. An online teacher survey was administered to all 44 classroom teachers within the scope of the study: all Kindergarten classroom teachers in the five schools and all Grade 1 teachers in four schools (one school was not implementing TWI in Grade 1 yet). The survey responses were collected between May 7 and June 3, 2019 using the online NoviSurvey tool.

After several reminders and a one-week extension of the survey completion window, a total of 31 teachers completed the survey for a response rate of 70% (13 Kindergarten teachers and 18 Grade 1 teachers).

Instrument. The classroom teacher survey was developed by OSA staff in collaboration with program staff from OCIP. The purpose of the survey was to examine the teachers' perspectives and experience with the implementation of TWI as well as professional development and support. The survey items included multiple choice and open-ended questions.

Interviews with Principals

Sample. All five principals at the five TWI elementary schools were interviewed between April 8–12, 2019.

Instrument. The principal interview questions were developed by OSA staff in collaboration with program staff from OCIP. The purpose of the hour-long interview was to gather background information about the program and examine the principals' perspectives and experience with the implementation of TWI at their school as well as professional development and support.

Analytical Procedures

Classroom observations were summarized and counts of observed items were reported. Results of classroom observations were organized by principles from the *Guiding Principles of Dual Language Education* (Howard et al., 2018). Examples were also shown to illustrate findings.

Principal interviews were synthesized and analyzed for recurring themes. A descriptive summary and examples of quotes were used to illustrate the interview findings.

Descriptive statistics were used to summarize the survey responses of classroom teachers and were reported in total; any differences in disaggregated data were noted where applicable. Teacher responses to open-ended questions on the surveys were analyzed and reported in terms of themes and categories that emerged, and examples were used to illustrate the findings.

Strengths and Limitations of Methodology

Strengths

A mixed-method approach was used to provide both complementary analysis and triangulation of the data, thus improving the validity of the findings. Program documentation, classroom observations, surveys and interviews were utilized among classrooms, teachers, and administrators.

Data were collected through direct observations; compared with self-reports, direct observations using a systematic protocol are a more objective method of measuring instructional practices. Further, the classroom observation protocol was test piloted in several classrooms to strengthen the validity of the instrument and strengthen the internal reliability between the observers. To ensure the study captured the most relevant and useful information, all data collection instruments (observation protocol, teacher survey, principal and contact interviews) were developed in collaboration with program staff from OCIP and were guided by the *Guiding Principles for Dual Language* (Howard, 2018).

The teacher response rate was 70%, which is higher than typical MCPS teacher survey response rates. The teacher survey included open-ended items in order to determine the full extent of stakeholders' experiences and provide respondents with the opportunity to elaborate. These qualitative data provided details describing a range of experiences and contexts about the implementation of TWI.

Limitations

The total number of teachers implementing TWI was 44, so even a relatively high survey response rate of 70% yields only 31 responding teachers for analysis. Given the sample of only 31 teachers, and the varying cohorts and implementation approaches by school, the ability to disaggregate survey data was limited.

The scope of implementing TWI, especially in these early years, is large and fluid. Therefore, this study may not have addressed all the various ongoing aspects of the program nor acknowledged

all the changes that occurred as program and school staff worked on making adjustments and improvements as they implemented throughout the year.

Results

The following results are organized by evaluation questions.

Findings for Question 1: What are the characteristics of the schools implementing TWI and their students?

Characteristics of TWI schools

TWI schools typically had a student enrollment near 500 (four schools ranged from 488 to 579 students); however one school (Rolling Terrace Elementary School) had a much larger enrollment with 892 students (Table 5). Three of the TWI schools were Title 1 schools in 2018–2019 and the other two were MCPS focus schools[3]. The percentage of Black or African American students were about 25% or less (ranged from 12%–26%). The percentage of Hispanic/Latino students varied across the schools from 35% to 77%. The percentage of ESOL students also varied; three of the five schools had just over 50% of its student population receiving ESOL services while the other two had 32% and 13% receiving ESOL services. Finally, all but one of the schools had more than two-thirds of their students receiving FARMS services (67% –79%) and one school had one third receiving FARMS services.

Table 5
TWI School Characteristics

TWI Elementary Schools	Enrollment Size	ESOL %	FARMS %	Special Education %	Black or African American %	Hispanic/ Latino %	School Status
Brown Station	579	32.0	66.7	17.1	26.1	48.4	Focus
Kemp Mill	532	51.9	79.1	7.7	14.8	77.1	Title 1
Oakland Terrace	488	13.3	33.0	16.4	11.7	34.8	Focus
Rolling Terrace	892	52.2	71.9	7.2	14.9	67.9	Title 1
Washington Grove	482	52.1	72.8	16.4	23.2	59.3	Title 1

Source. Demographics from Schools-at-a-Glance 2017-2018.
Title 1 and Focus school indicators are during the SY 2018-2019.

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[3] A focus school is defined as a school that does *not meet* the level of poverty for Title I designation, but has a high percentage of students identified as FARMS.

Characteristics of Enrolled TWI students

More than one half of the students across the five schools who participated in TWI during 2018-2019 (including Grade 2 students at one school), received ESOL services (Appendix B). Further, more than one-half were Hispanic/Latino and received FARMS services. Among the students who received ESOL services, one third received Level 1 ESOL services (the lowest level of English proficiency; the percentage of ESOL services and level varied by school). Finally, among all the students in the program, English is the primary language spoken at home by 62% and Spanish is the primary language spoken at home by 34% of students, as reported by MCPS records (Appendix B).

Findings for Question 2: What processes and structures were used by central office and schools to support the implementation of TWI?

The following is a summary of professional development and instructional planning supports provided during the 2018–2019 school year. Training documentation and literature, discussions with program staff, interviews with school contacts (i.e. staff development teachers and reading specialists), and selected teacher survey findings were used to answer Question 2.

Professional Development and Supports

Summer Professional Development. Four different sessions of professional development, led by the consultant, were offered to Kindergarten and Grade 1 TWI teachers and TWI staff during August 2018 (Table 7). A two-day training (The Dual Language Essentials) was offered at each of the schools new to TWI (Rolling Terrace and Oakland Terrace); participation was also extended to bilingual teachers at Gaithersburg Elementary School. The training held at Oakland Terrace Elementary School was also for new teachers from the other TWI schools. A total of 33 staff (29 from TWI schools) and 35 staff (25 from TWI schools) attended these trainings respectively. Additionally, a 2-day training (The Dual Language Classroom: Instructional Strategies) was held for returning TWI teachers and staff; 41 staff from the 3 returning TWI schools attended. Also, a 1-day training was held for Spanish teachers of Dual Language programs; half of the 34 participants were from TWI schools and half were from other schools with Spanish immersion programs. As shown in Table 7, the majority of participants were K–2 teachers; however, there were other staff attendees such as administrators, ESOL teachers, specialists, support staff, media specialists, and teachers from other grade levels.

Table 7
Two-Way Immersion Professional Development Summer 2018

	The Dual Language Essentials (2 Days)	The Dual Language Classroom Essentials (2 Days)	Dual Language Classroom: Instructional Strategies (2 Days)	La Clase Dual: Instruccion en Espanol (Spanish Literacy Methods) (1 Day)
Location	Rolling Terrace ES	Oakland Terrace ES	Brown Station ES	Kemp Mill ES
Target	Year 1 Rolling Terrace Staff	New TWI Staff	Returning TWI Staff	Spanish Instruction Teachers
Attendance	33	35	41	34
Participants and their School Locations	TWI staff: 29 Rolling Terrace=27 Kemp Mill=2 Non-TWI: Gaithersburg=4	TWI staff: 25 Oakland Terrace=17 Washington Grove=5 Brown Station=4 Kemp Mill=2 Rolling Terrace=1 Non-TWI: Gaithersburg=3 Kennedy=1 CESC=2	TWI staff: 41 Brown Station=15 Washington Grove=10 Kemp Mill=16	TWI Staff: 17 Rolling Terrace=7 Kemp Mill=3 Oakland Terrace=3 Washington Grove=2 Brown Station=2 Non-TWI: Burnt Mills=6 W.T. Page=4 Rock Creek Forest=4 Gaithersburg=3
Participant Titles	K-1 Teachers: 16 ESOL Teachers: 8 Other (Admin, Rdg Specialist, Media, Focus): 9	K-1 Teachers: 15 ESOL Teachers: 4 Other (Admin, Rdg Specialist, Counselor, Media, Para): 16	K-2 Teachers: 21 ESOL Teachers: 3 Other (Admin, Rdg Specialist, Media, Focus, Special Ed, Grade 3-4, Para): 17	K-2 Teachers: 28 Other (support staff, Coordinator, SDT): 6

Note. 18 participants attended two different sessions
All above PD provided by Dr. Jose Medina: Educational Solutions, LLC

One-on-one coaching sessions. The consultant provided professional development opportunities throughout the school year in the form of four job-embedded coaching sessions (one for each marking period) at each TWI school (Table 8). This included classroom observations of TWI classroom teachers (7-8 maximum per school) followed by a one-on-one debriefing session with the individual teacher and a debriefing with the principal at the end of the day.

Table 8
Coaching and Planning Sessions for TWI Schools: Schedule and Participants

	October	December	January/February	March/April
One-on-one Coaching	TWI Classroom Teachers	TWI Classroom Teachers	TWI Classroom Teachers	TWI Classroom Teachers
Quarterly Planning	Kindergarten Teachers		Kindergarten Teachers	Kindergarten Teachers
	Grade 1 Teachers		Grade 1 Teachers	Grade 1 Teachers

Quarterly PD and marking period planning sessions. The consultant also provided professional development in the morning during grade level quarterly planning sessions (October, January, and March) where TWI grade level teachers from all five schools assembled in one location (Table 8). The morning portion of the sessions focused around themes determined by the consultant (e.g. translanguaging, bridging, language and content objectives). During the afternoon, teachers worked together to create their big-picture plans for the upcoming quarter, with guidance and structure provided by some teacher leaders from the TWI schools.

Instructional Planning

In addition to the quarterly planning, teachers planned within their school. From interviews with school contacts, and follow-up questions with observed teachers, three categories of planning were identified. They were as follows: 1) planning with the grade level team; 2) planning with language-alike teachers (English teachers paired with English teachers and Spanish teachers paired with Spanish teachers); and 3) planning with instructional partners (paired Spanish and English teachers who teach the same group of students (Figure 4). One school reported that they were able to get extra planning time for the school year, which teachers could use how they needed.

Grade Level Team	Language Alike Teachers	Paired Partner Teacher
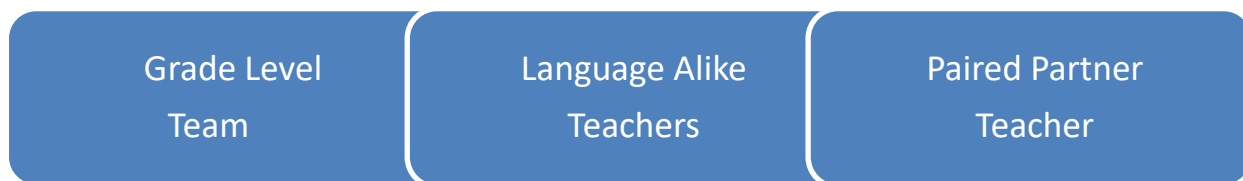
Figure 4. Levels of instructional planning among TWI schools.

Grade-level team planning. Although staff at the five schools varied in the specifics of how they plan, grade-level teams met weekly and planned for the upcoming objectives and skills to be covered, usually for the following week. This planning meeting may have also included the Staff Development teacher and/or specialists such as reading specialist, ESOL teacher, special education teacher, math content coach.

Language alike teacher planning. Teams also planned by language, either as a separate meeting, or combined with the grade level team or as paired partners. Some language alike teams planned objectives and concepts for the upcoming week, some planned strategies, and some indicated that they divvy up the curriculum by language. Examples included: one language team taught one

writing assignments and another language team taught another writing assignment; one language team taught the 2-dimensional shapes concept for math and the other taught 3-dimensional shapes; each language team covered a different animal for science unit, etc. In the case of bilingual teachers who taught one class of students in both English and Spanish, they either chose whom to plan with as it made sense or alternated their planning with each of the language teachers.

Paired partner teacher planning. Teachers also planned with their partner teacher, mostly on a weekly basis in addition to regular informal communication. In many schools, the partners were located next door to each other, some even with adjoining doors. Partners may have fine-tuned their lessons, assuring that they were continuous and not overlapping, as well as discussed specific students and student data. In most cases, each teacher planned their individual lessons themselves as it made sense for their students, but collaborated with the other teachers to assure they were meeting the common objectives and that the lessons were continuous for the students between languages. This aligns with Principle 2, Key Point C of The Guide, which states that instruction in one language should build on concepts learned in the other language.

Descriptive examples of planning. One interview with a school contact explained their planning this way, "Extended Planning is once a week…it's when we all get together (i.e. teachers, specialists and administrators). Teachers and specialists give an update of what they did and saw the past week. Then they break out by language teams (the bilingual teacher picks where they want to go). In that breakout by language, they plan the upcoming week and decide language and mastery objectives. Then they come back and share with each other. Language partner time is when [paired teachers] do their planning of students and share data."

Another school contact explained it as "All teachers on the grade level team meet once a week for reading and once a week for math; they look at indicators and what students should be able to know. Sometimes they will collaborate by language while the other language teachers watch. Paired teachers don't have a set schedule for collaboration. They decide and collaborate as topics come up." Additionally, another school contact reported, "For both grades, they all plan together but they sit in a way so they can plan with their [language] partner (i.e. curriculum coverage and specific students) and also talk with their language partner."

Frequency of instructional communication. Teachers were asked in the online teacher survey how often they communicate with other grade level teachers about instructional lessons. Most of the teacher respondents (93%) reported that they communicate *3 or more times a week* or *1-2 times a week* (Figure 5). Teachers were also asked how often they communicate with other teachers about student achievement. More than three fourths (77%) reported that they communicate about student achievement *3 or more times a week* or *1-2 times a week* (Figure 6).
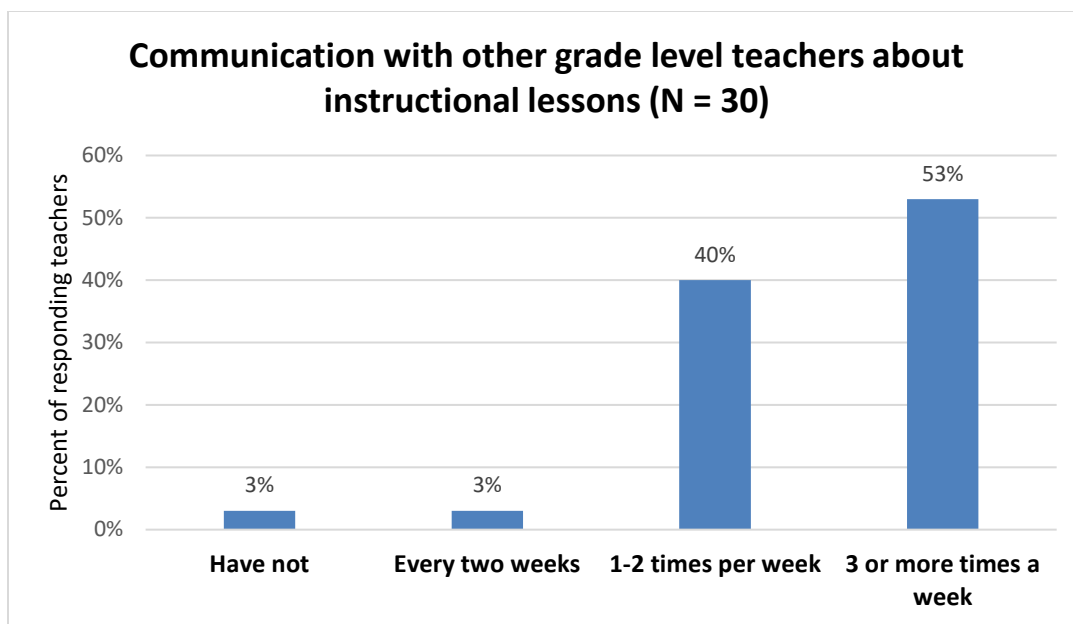
Figure 5. Frequency of communication about instructional lessons.
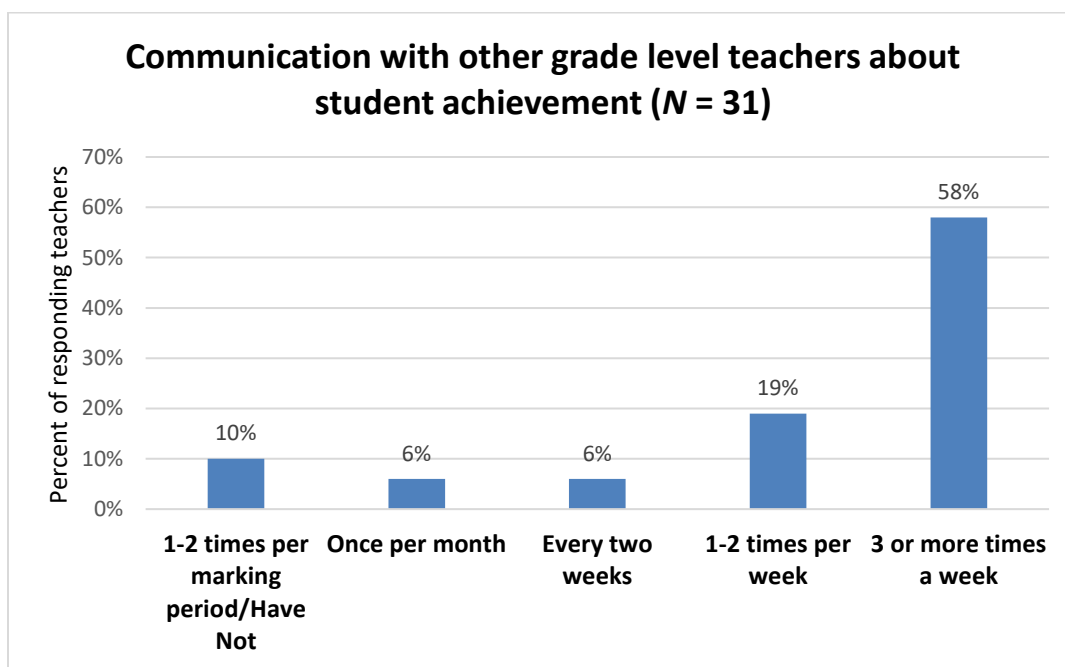
Figure 6. Frequency of communication about student achievement.

ESOL teachers

The number of ESOL teachers allocated to schools is based on school need and enrollment, such as the distribution of student ESOL proficiencies. Staff Development Teachers and/or Reading Specialists were asked how ESOL teachers are utilized in the TWI program at their school. The number and way ESOL teachers were used in TWI schools varied by school. Some of the ESOL

teachers speak Spanish and some do not. In three of the schools, there was an ESOL teacher assigned to Kindergarten and an ESOL teacher assigned to Grade 1; in one school there were three ESOL teachers per grade (K–Grade 1); and in another school there was one ESOL teacher who covered both grades. Two of the schools did not have their ESOL teachers supporting students whose first language is Spanish and were in the TWI program. Additionally, the ESOL instructional model varied by school and their students' needs (e.g. pull out vs. plug in or a combination); varying ESOL instructional models is typical across MCPS schools.

Summary of Question 2, Processes and Structures

In summary, TWI teachers were supported through a variety of professional development opportunities delivered by the consultant: a) a two-day summer session for experienced and new teachers and Spanish teachers; b) one-on-one coaching sessions for up to 7–8 teachers per school each marking period; and c) quarterly planning sessions with all TWI teachers by grade level. Additionally, Dr. Medina's C6 Instructional Framework was provided as a planning resource. Within the schools, there was: a) school-level grade level team planning, b) language alike teacher planning and c) planning between the paired teacher partners, but schools differed in how their planning occurred. Grade level planning usually occurred once a week and focused more on objectives of the upcoming week's lessons. Staff reported that planning is important to assure that students are receiving continuous, but not repeated, instruction in each language and that concepts are building on each other. Most teachers reported that they communicate with other teachers about instruction or student achievement three or more times a week or one to two times a week. The number of ESOL teachers and their instructional model in providing support to TWI varied by school; two of the schools did not allocate an ESOL teacher to support their Spanish speaking TWI students.

Findings for Question 3: To what extent was TWI implemented in the schools and classrooms?

Instructional schedules (from documentations and school contact interviews) and classroom observations were used to answer Question 3. *The Guiding Principles of Dual Language* was used as a primary source for guiding the collection of data to address Question 3; specifically, Strand 3: Instruction. Strand 3 is made up of four principles (Figure 7), each with a series of key points (Figure 8 shows key points for Principle 1). The principles and key points selected were those that could feasibly be addressed using the data collection tools within the scope of this study.

STRAND 3: INSTRUCTION from *The Guiding Principles of Dual Language*
Principle 1: Instructional methods are derived from research-based principles of dual language education and ensure fidelity to the model (Key Points A-G)
Principle 2: Instructional strategies support the attainment of the three core goals of dual language education (Key Points A-H)
Principle 3: Instruction is student centered (Key Points A-D)
Principle 4: Instructional staff effectively integrate technology (Key Points A-B)

Figure 7. Principles under Strand 3: Instruction from *The Guiding Principles of Dual Language* (Howard, et al., 2018).

Instructional Schedules

Background. As pointed out by Thomas and Collier (2009, p. 32), the non-negotiable components of a dual language education are: a) at least 50% of the instructional time must be taught in the non-English (partner) language, b) separation of the two languages for instruction, and c) a PreK/K–Grade 12 commitment. These components also align with Principle 1 of Strand 3 (Figure 7). MCPS uses the 50/50 dual language model where half of the instructional time for all the subjects is taught in the partner language and the other half in English. All five schools delivered content instruction, including language arts, in both languages and strove for a 50/50 division; the approach for scheduling, however, varied across the schools.

The following instructional schedule findings were obtained through interviews with the TWI school contacts and examination of school schedules; the findings address Principle 1, Key Points A through D. The *Guiding Principles of Dual Language* provides descriptions of minimal alignment, partial alignment, full alignment, and exemplary practice for the Key Points. Full alignment of these four key points are described in Figure 8:

Principle 1: Instructional methods are derived from research-based principles of dual language education and ensure fidelity to the model
Key Point A: The program model and corresponding curriculum are implemented with fidelity.
Key Point B: Instruction incorporates appropriate separation of languages to promote high levels of language acquisition.
Key Point C: Standards-based academic content instruction is provided in both program languages in a coordinated way.
Key Point D: Explicit language arts instruction is provided in both program languages, is based on language-specific standards, and is coordinated across languages to ensure literacy development.

Figure 8. Principles and Key Points A-D under Strand 3, Principle 1: Instruction from *The Guiding Principles of Dual Language* (Howard et. al, 2018).

Regarding TWI instructional schedules and whether students are served best with a schedule that exposes students to each language every day, alternating days, or alternating weeks, the most recent edition of the *Guiding Principles for Dual Language Education* states that there is no research that has compared these approaches. Regardless, the guide maintains there is an argument against an alternating language approach in that students need to practice both languages, particularly the partner language, every day in order to optimize language development. The guide also declares the following:

> "No research has examined whether alternate day learning is less or as effective as daily learning through each language, and it is not clear whether alternate day programs could be considered distributed practice since the alternation occurs every other day. However, especially for young learners of a second language, daily use is likely important to promote higher levels of second language development, especially since content is taught through that language."

Furthermore, Thomas and Collier do not recommend "a whole-week alternation in the early grades because students need more frequent exposure to both languages in the early years of second language acquisition" (2012, p. 36).

This evaluation examined school schedules by: a) the general schedule format from both the student view and teacher view, b) the class content by instructional language, c) the specials by instructional language, d) the instructional time among languages, and e) bridging. Table 9a describes the instructional schedules for the five TWI schools.

School schedule format. In four of the five schools, students received their daily instruction as one-half day in Spanish and one-half day in English with most students changing their classroom and teacher mid-day. Spanish and English teachers were paired as instructional partners and teachers provided instruction in their instructional language to two groups of students in one day; therefore, teachers are teaching the same content twice each day. Two school contacts reported that each semester or marking period, they switched which group of students started their day with English instruction and which started with Spanish instruction in the morning. In some of the schools, there was an odd number of classes within a grade; therefore, there was one single model class taught by a bilingual teacher and the same group of students were taught in Spanish for one-half day and in English for one-half day without switching teachers or classrooms.

In one of the five schools, Kemp Mill, students alternated their language of instruction weekly; one week they were given instruction in English all week and in the next week, all their instruction occurred in Spanish. Table 9a shows the format for the each of the five TWI school schedules from both the student view and from the perspective of the teacher.

Table 9a
Format of TWI School Schedules in 2018–2019

Schedule	Brown Station ES	Rolling Terrace ES	Washington Grove ES	Oakland Terrace ES	Kemp Mill ES
Student View	½ day English/ ½ day Spanish				1 week English/ 1 week Spanish
Teacher View	Paired Teachers: Each teacher instructs one group of students for ½ day and another group of students for the other ½ day in the teacher's language of instruction. The teacher teaches the same content in both halves of the day. Single Model Teacher: Teacher instructs one group of students in English for ½ day and the same group of students in Spanish for other ½ day. The teacher teaches the same content in both halves of the day (e.g. language arts in Spanish for ½ day and language arts in English for ½ day.)				Paired Teachers- Each teacher instructs one group of students for one week and another group of students for the other week in teacher's language of instruction

Class content by instructional language. In three of the five schools (Brown Station, Rolling Terrace, and Washington Grove elementary schools), the time spent on each content area alternated each week by language (Table 9b). At another school (Oakland Terrace Elementary School), the content alternated every other day. Teachers at another school (Kemp Mill Elementary School) taught all content each week so that students experienced all content in English one week and in Spanish the next week. It is worth noting that at one school, staff conveyed that they originally had set up a two day content rotation, but then switched to alternating content each week because they found it easier to manage, plan assessments, and plan lessons (especially "passing the baton" between partner teachers).

In all five schools, language arts and math were taught in both English and Spanish (Table 9b). In three of the schools, English and Spanish teachers alternated teaching social studies and science so students received each in both languages. In two schools, social studies is taught in English and science in Spanish; one school explained that the decision was made because in looking ahead to Grade 5 social studies, resources such as the U.S. Constitution, would be easier to locate in English.

Table 9b
Instructional Language of Classroom Content in 2018–2019

Content	Brown Station ES	Rolling Terrace ES	Washington Grove ES	Oakland Terrace ES	Kemp Mill ES
Format of Content by Instructional Language	Content, or time spent on content, **alternates weekly** between language of instruction. For example, a student has math in morning (English) and Language Arts in afternoon (Spanish) and the next week they will have Language arts in the morning (English) and math in the afternoon (Spanish) .			Time spent on content **alternates every other day** For example, a student has math in morning (English) and Language Arts in afternoon (Spanish) and the next day they will have Language arts in the morning (English) and math in the afternoon (Spanish	Content is taught every week and language alternates each week. Therefore students will get all content in English one week and all content in Spanish the opposite week.
	Language Instruction				
Language Arts	Spanish and English	Spanish and English	Spanish and English	Spanish and English	Spanish and English
Math	Spanish and English	Spanish and English	Spanish and English	Spanish and English	Spanish and English
Social Studies	**English**	**KG: Both** **1st: English**	Spanish and English	Spanish and English	Spanish and English
Science	**Spanish**	**KG: Both** **1st: Spanish**	Spanish and English	Spanish and English	Spanish and English

Specials by instructional language. The instructional language of specials (i.e. art, physical education, and music) is highly dependent upon the staffing and the language skill of the teacher; school staff and administrators have voiced that they would like to get more bilingual instructors for specials. Most specials in the five schools were taught in English only (Table 9c). However, Washington Grove Elementary School was able to offer art in Spanish to their Kindergarten (KG) students; Oakland Terrace offered art in both languages, and Kemp Mill offered physical education in both languages.

Table 9c
Instructional Language of Specials: Art, PE, Music in 2018–2019

	Brown Station	Rolling Terrace	Washington Grove	Oakland Terrace	Kemp Mill
Art	English	English	**KG: Spanish 1st Gr: English**	**Spanish and English**	English
PE	English	English	English	English	**Spanish and English**
Music	English	English	English	English	English

Instructional time among languages. All the schools strove for a 50/50 split between languages of instruction, but scheduling complexities such as lunch, specials, recess, and recommended bridging activities are a challenge for the four schools which implement a one-half day per language instructional day. From examinations of school schedules and interviews with school contacts, schools have addressed these scheduling issues in different ways, such as: embedding social studies/science with language arts and math; incorporating social/studies science into bridging activities that are scheduled during days with no specials; switching language classes earlier than the natural break for lunch to allow for a better 50/50 division; and switching students' schedules each marking period or semester so that they alternate the order of their daily instructional language. In one school, a 70-minute bridging activity was scheduled on Friday afternoons with the paired teachers reportedly splitting their time in the morning.

Bridging. To incorporate the bridging component, partnered classes in TWI schools came together to create an artifact, usually an anchor chart, where cross-linguistic connections were made and documented.   From school schedules and interviews with school contacts, one school had allocated time for a bridging activity built into their schedule to occur on Friday afternoons; another school incorporated their bridging activity with social studies/science on days without specials; and another school's contact reported the teachers schedule bridging as it makes sense with the topics being covered in the curriculum.

Teachers were asked in an online survey to indicate how often they implemented a bridging activity with their instructional partner or their class (if single model teacher). Just under three fourths of the teachers (71%) reported that they implemented a bridging activity once a month or every two weeks (Figure 9).

How often do you implement a bridging activity?
(N = 31)
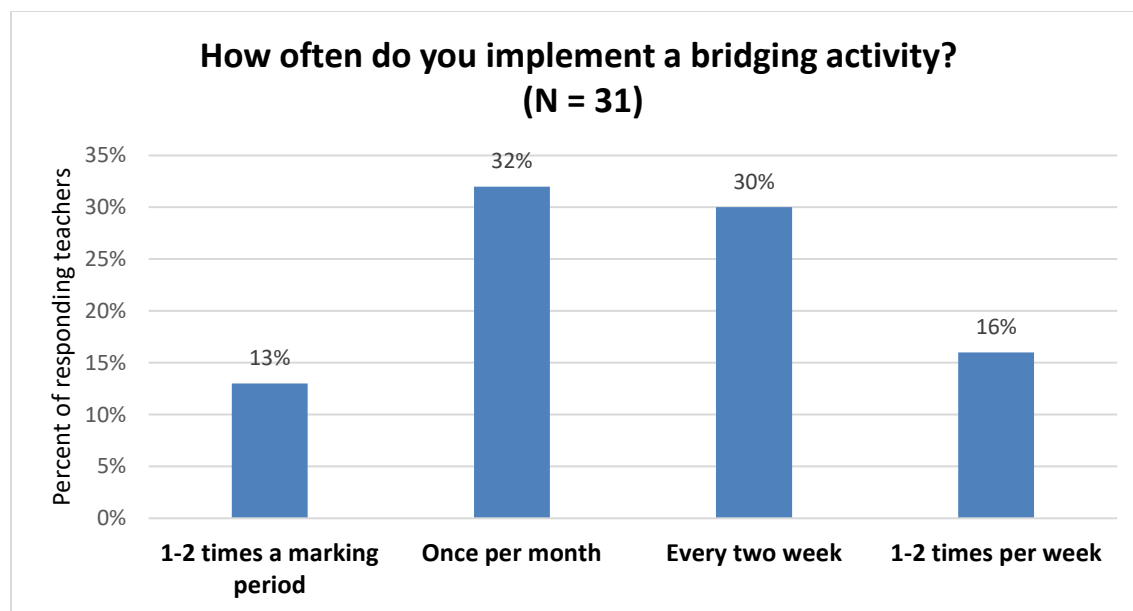
Figure 9. Frequency of Bridging Activity.

Observed Classroom Implementation

Observations were completed in 29 classrooms (15 Kindergarten and 14 Grade 1) during English Language Arts or math instruction; 15 were in classrooms with English instruction and 14 were in Spanish instruction. The breakdown of observations can be seen in Table 3 under Methodology. Selected principles and key points from Strand 3: Instruction of the *Guiding Principles of Dual Language Education* were used as the source for the classroom observation data collection tool. The classroom observation findings below are organized by principle and key point.

> Principle 1: Instructional methods are derived from research-based principles of dual language education and ensure fidelity to the model

> *Key Point B: Instruction incorporates appropriate separation of languages to promote high levels of language acquisition*

Speaking in language of instruction. Teachers in all 29 observed classes spoke in the language of instruction all of the time (n = 19) or most of the time (n = 10). Those who spoke in the language of instruction most of the time were split evenly between teachers whose language of instruction was English and teachers whose language of instruction was Spanish; most of these occurred to make a connection in the other language, especially with specific words or with the use of a cognate chart. In some cases, teachers used the other language to nudge the student to speak in the language of instruction and sometimes it was to make more substantial multi-linguistic connections such as going over daily rules or vocabulary words in both languages.

Just over half of the teachers redirected or nudged their students to speak in the language of instruction, usually 1 to 2 times (versus 3 or more times). Most occurred during guided group, and the majority were in Spanish instruction classes. For example, a teacher would say "en español por

favor," but sometimes they would nudge in English such as, "you can say that in Spanish too, right?"

Using materials in language of instruction. All of the 29 classrooms used materials (e.g. books, worksheets, etc.) in their language of instruction (i.e. monolingual materials); however, in two English instruction classes, students went over rules or text features in Spanish as well. It is important to note that the authors of the *Guiding Principles of Dual Language Education* further explained to not only encourage consistent use of the applicable language of instruction, but also to ensure that opportunities exist for students and teachers to use both languages concurrently either through brief teachable moments or extended activities (e.g. bridging).

Artifacts in language of instruction. Monolingual artifacts in the language of instruction, were in all of the observed classrooms. Bilingual artifacts were also seen, and many times, these were located in designated parts of the room. Examples of these artifacts are detailed below. Most of the monolingual posters were not made by teachers (i.e. store bought), so they were not color coded to the school's specific color scheme; TWI staff are encouraged to choose a designated color scheme for the marker used to write each language (e.g. blue for Spanish and orange for English). The balance of bilingual to monolingual artifacts varied by classroom.

- Examples of monolingual posters or charts included:
  - *English language arts*—sight words, word families, the alphabet, high frequency words, writing strategies, gender pronouns, articles (Spanish classrooms), irregular verbs, common adjectives, syllables, strong and weak vowels, terminations
  - *Math*—numbers, math vocabulary, math strategies, measurement strategies, shapes
  - *Other*—instructions and rules, classroom procedures, labels throughout the room, kind words, fruits and vegetables, days and months, and weather.

> Principle 2: Instructional strategies support the attainment of the three core goals of dual language education [bilingualism and biliteracy; high academic achievement in both program languages; sociocultural competence].

> *Language Objectives and Language Domains*: 4 + 1

Language Objectives: Written language objectives were displayed in 13 of the classrooms; 9 of those were also spoken by the teacher with an additional two spoken (but not displayed) by the teacher. Some examples (posted in either English or Spanish) of observed language objectives were: "Students will orally discuss what they learned from the picture and from the text;"; "I can formulate questions orally using words like what, how, when, why, where, and who"; "Be able to say key details and talk about them" and "Read" and "write" was posted on a poster at the class door.

Language Domains. The use of the 4 + 1 domains (Figure 10) were emphasized in trainings and professional development resources along with specific strategies on how to implement in the classroom (e.g. using 4+1 visual cards). "When emergent bilingual students have an opportunity to explicitly focus on, and practice the 4+1 language domains, they are more readily able to access grade level standards in both program languages." (2018, Medina: Educational Solutions).

Emergent bilingual students must have an opportunity to engage with grade level content, and the language of that content area, via the four language domains, in two program languages:
1. Speaking
2. Writing
3. Reading
4. Listening

In addition, they must also be able to consider how each of the two program languages supports the other:
- Metalinguistic Awareness

Figure 10. 4+1 Language Domains (2018, Medina: Educational Solutions).

The 4+1 Language Domains strategy is not specifically described as a key point in the Guide; however, it aligns with Principle 2 because the strategy facilitates the attainment of the three goals of dual language.

All of the observed classrooms had the 4+1 visual cards displayed somewhere in the classroom. In 25 of the 29 observations, at least one of the 4+1 domains was referred to; the majority referred verbally to the domains. Although the domain visual cards were displayed, specifically using them was not frequently observed.

- In 16 of the classrooms, the domain(s) were verbally referred to, without specifically using the visual cards. For example, a teacher may have said, "We will practice our writing during guided group," "We will practice our listening and speaking," or "It's time to listen, not speak."

- In 9 of the classrooms, the 4+1 visuals were utilized in conjunction with verbally identifying them. Four classrooms included students being asked to identify the domain they were using. For example, a teacher pointed to the visual cards and asked students "If we're going to read a book, what are we using?" In one classroom, a teacher placed the "speaking" card in front of the student who was sharing and the "listening" card in front of the other students during a guided reading lesson. In another classroom, the cards were being used in an English instruction class that included a translanguaging center that had the targeted visual card displayed.

> *Key Point B: Teachers use sheltered instruction and other pedagogical strategies for bilingual learners to facilitate comprehension and promote language and literacy*

Table 10 displays the frequency of instructional strategies which were observed, along with examples, from the 29 observed classrooms. All, or just under all, of the classrooms were seen using visuals, giving positive feedback, and checking for understanding. The majority were seen using the following strategies: making connections to prior knowledge, building background knowledge, explicitly using language frames (mostly during whole group or individual tasks), modeling phonics, using deliberate and repetitive speech, using nonverbal gestures or Total Physical Response (TPR), and incorporating formative assessments. Incorporating songs, chants or poems were observed in ten of the classrooms.

Table 10
Classroom Observation Frequencies for Instructional Strategies ($N = 29$)

Strategy	Number of Classrooms where strategy was observed	Examples
Uses visuals	29	Pictures/images to accompany lesson, drawings, map, globe, interactive graphics on promethean board, paper model of 3-D shapes, toys/manipulatives
Incorporates songs, chants, poems	10	Some students sang, some teachers sang to students
Connections to students' prior knowledge	24	Teacher says: "Remember….", "yesterday….", "last week…..", "share what they know….", "share experience….."
Building background knowledge	22	Introduce new vocabulary, conduct a book walk, introduce a new concept before reading a book or before doing an activity (e.g. climate, comparisons, habitat, mudslides)

Strategy	Observed	Observed 3+ times	Observed 1-2 times	Examples
Explicitly uses language frame	23	16	7	_____mide____ de largo: used during a measurement task *Most language frames were during whole group or individual tasks
Models phonics/reading words	23	18	5	Sounds out letters, emphasizes sounds, demonstrates the different 'g' sounds in Spanish

Strategy	Number of Classrooms where strategy was observed			Examples
Uses deliberate and repetitive speech	24	18	6	Repeats words, slows down speech (at key moments or sometimes it's throughout the class)
Nonverbal such as gestures, mime, Total Physical Response (TPR)	21	17	4	Described arriba, encima, abajo (above, on top, under) using hands and body, used hand to show act out when something is rolled, act out/imitate animals, several used consistent hand gestures with words (similar to sign language)
Gives positive feedback	29	27	2	Positive feedback given to student (e.g. "excellent," "very good", "good job", etc.), hi-fives, stars on a chart, pretend money or points for good behavior
Checks for understanding	28	22	6	Questioning, thumbs up/thumbs down, responses on wipe board
Formative assessment	24	12	12	Assignments to be handed in, running records

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Key Point C: Instruction in one language builds on concepts learned in the other language

According to interviews with program staff and administrators, instruction is planned so that concepts taught in one language continue when students switch in the next language. One teacher noted in their follow-up response to the observation, "…during team planning, we discuss with our partner teacher what lessons we completed in math and reading so the other teacher knows what to take over during the next week."

During four of the classroom observations, the teacher referred to their partner teacher and what was, or will be, covered in class in relation to what they were currently doing.

Key Point D: Instruction promotes metalinguistic awareness and metacognitive skills
Key Point E: Instruction leverages students' bilingualism by strategically incorporating cross-linguistic strategies
Key Point H: Teachers use a variety of strategies to promote the sociocultural competence of all students

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Classroom artifacts. All 29 classrooms displayed bilingual posters or anchor charts; charts that were created by the teacher or class were in the two designated language colors for their school (e.g. Spanish in orange and English in blue). In 16 of the 29 classrooms, other multicultural artifacts were observed. Examples are shown in Table 11.

Instruction. Evidence of cross-cultural awareness and multicultural appreciation were observed during nine of the classroom observations. Instruction which promotes metalinguistic awareness and metacognitive skills between both languages (e.g. purposeful translanguaging, use of cognates[4], discussion or analysis of languages) was observed in 20 classrooms. Specifically, using or creating a cognate chart (n = 7), making connections to words in both English and Spanish as they occurred (n = 7); and other examples (n = 7). Examples of each are shown in Table 11.

Table 11
Frequencies of Multicultural and Metalinguistic Awareness Artifacts and Instruction ($N = 29$)

Artifacts	Observed	Examples
Bilingual Posters or Anchor Charts	29	Cognate charts, science words, text features, math operations, everyday objects, labels for centers, colors, who/what/when, steps for brushing teeth, settings, senses, feelings, shapes, food pyramid, landforms. Parts of a plant, animals, numbers, climate, math terms, countries, measurements, class routines, verbs, social justice terms such as discrimination, equality, the 3 pillars, what writers do, etc. Note: those made by teacher or class were in the two designated language colors for their school (e.g. Spanish in orange and English in blue). Note: several "Cognado Walls" or "Cognate Detectives" were observed, where cognates were displayed and additional cognate words are meant to be added using post-it notes as students discover them.
Other Multicultural Artifacts	16	Flags, books on other cultures, a poster displaying how to say hello and goodbye in many languages, pictures of students next to the flag of their origin county, posters of young people from various cultures, maps of other countries, facts about schools in the world, maps with languages spoken, etc. Note: two observed quotations were "Being Bilingual is a Super Power" and "We are culturally and linguistically diverse" were displayed with student self-portraits.

[4] Cognate is a word that comes from the same origin as a word from a different language. Cognates usually have similarities in spelling, pronunciation, and meaning. For example, telephone in English and teléfono in Spanish.

Instruction	Observed	Examples
Cross Cultural Awareness and Multicultural Appreciation	9	Comparing climates between various countries; the use of a book on Mariachis and the tale "el miton"; pointing out Independence Day in the Dominican Republic; comparing various countries' flags; pointing out a student was using the same colors as the flag of Colombia. Showing Spanish words which may vary by country, such as: • Tejón versus mapache (raccoon in English) • in a student's home country, crayon is "la crayola" whereas in the teacher's country it's "el crayon" • chocar (to choke) is used in Puerto Rico where as atragantar is mostly used in other Spanish speaking countries.
Metalinguistic Awareness and Metacognitive Skills Between Both Languages	20	• Using or creating cognate chart (n = 7), such as; using charts for 3D shapes, decoding strategies, text features, and adding to an existing cognate chart. Most occurred in English instruction classes. • Making connections to words in both English and Spanish as they occurred (n = 7). In a couple of the observations, students pointed out the connection between the two languages (most occurred in Spanish instruction classes). • Other examples (n = 7) included a translanguaging center, a review of text traits in Spanish and English, and students writing the same sentence in both languages.

Bridging Activities Observed. In addition to the language arts and math classroom observations, four bridging activities were observed for descriptive purposes (one Kindergarten and three Grade 1 classes across different schools). All four bridging activities brought together two classes of students (one from Spanish instruction and one from English instruction.) The activities were led by the two classroom teachers and who only spoke in their language of instruction during the activity. In one case, the two teachers wore the designated color hat for their language of instruction. Three of the observed activities lasted 1 hour and one was 40 minutes.

The bridging activity content included: two science lessons (the cycle of a beetle and ways to conserve the environment); a social studies lesson on describing landforms; and a reading lesson on text features. In three of the four bridging lessons, the instruction alternated between Spanish and English, repeating the concepts in both languages. In one of the bridging lessons, the first half of the lesson was in Spanish followed by repeating the concepts in English instruction for the second half.

All of the bridging lessons included reference to the 4+1 domains, for example, "We will be practicing listening and speaking" or having a student come to the front of class and move a clip beside the pictures that indicate which domain(s) the class will be practicing. All the lessons had students practicing their speaking by having the whole group speaking aloud or repeating a word or sentence, as well as teachers asking students to respond to open ended questions. In three of the observations, some of the lesson or most of the lesson was delivered in pairs. Examples included, turn to your partner and practice using "I can speak, I can listen"; work on talking with a partner about how to complete a sentence frame with an adjective and a landform; and turn and talk to each other to practice reading a written sentence in Spanish using listening and speaking skills.

In the observed bridging lessons, all of the teachers used some level of hand gestures, mimes, or acting out when speaking; one lesson had students use the same hand gestures when speaking. They also all incorporated visuals such as pictures and writing out words during instruction. Finally, all of the observed bridging activities included at least one of the following: cognate charts created during the bridging activity; using cognate charts as a reference; searching for the cognates in the words they just learned about; or pointing out when a new vocabulary word is a cognate.

School-wide bilingual and multicultural artifacts. The following are examples of artifacts observed in the various TWI schools' halls, media center, office, and elsewhere (Table 12):

Table 12
Examples of School-wide Bilingual and Multicultural Artifacts

Artifacts	Examples
Hallways	Posters of 3 Dual Language Pillars in both languages School Mission and rules in both languages Bus groups in both languages Character traits in Spanish Classroom doors labeled "Señor _____" or "Señora ___" Flags of various counties
Media Center	Rules in both languages Sections of books in both languages Book selection in both languages Flags of different counties
Front Office	Check-in directions in both languages Poster of 3 Dual Language Pillars in both languages Objects around office labeled in Spanish
Other	Morning announcements in both languages School pledge and National Anthem in both languages Weather in both languages

Key Points G: Teachers use a variety of strategies to ensure equitable participation among all students

Almost all students rotated through small teacher guided groups, which ensured that all students participated.

Beyond the teacher guided groups, other strategies to ensure equitable participation occurred during whole group (n = 21); the majority (n = 16) occurred three or more times within the observed hour. Examples of observed strategies to ensure equitable participation included;

- Teacher called on the majority of students during whole group (n = 17)
- Equity sticks or a random selection software during whole group (n = 5)
- Turn and talk or pairing during whole group (n = 4)

Principle 3: Instruction is student centered

Key Point A: Teachers use active learning strategies in order to meet the needs of diverse learners

Learning Centers were utilized in 21 of the 29 classroom observations; most students were completing independent tasks but in a grouped seating arrangements. Active learning strategies which incorporated students purposefully working together, and were not teacher dominated, were observed in two settings; 1) during Learning Centers (n = 9); and 2) as pairs during whole group time (n = 4). Examples of these collaborative activities included: turn and discuss, sort and identify; practice; predict; math with someone else; etc.

Additionally, most of the guided groups incorporated active learning with the teachers facilitating the learning.

Key Point B: Teachers create meaningful opportunities for sustained language use

Sustained language use with teacher. Opportunities for sustained language use with teachers was observed in all 29 observations; all but one offered sustained language use three or more times. All of these included a variety of students being asked an open-ended question whether it was by being called upon to give an explanation, called to come to the board and explain/share, or to complete a sentence. In almost all of the observations (n = 24), students were seen collectively speaking such as reading text aloud, reading words aloud or repeating the teacher (e.g. counting, shapes, calendar). An example in one Spanish instruction classroom was having an identified "leader" for the day pronounce to the class the day of the week and to count, and all the other students were to repeat after the student leader.

Sustained language use with other students. In most cases, students rotated through centers while the teacher met with guided groups. Although students were frequently grouped with other students at centers, students were mainly working on their own individual tasks (e.g. worksheets, creating, a puzzle, computer activity/listening device, journals, activity such as cognates or language frames). Therefore, the opportunity to chat with other students was there, but it was not necessary to converse to complete the activity. However, in about one-third of the observations, students worked together at centers, either in small groups or in pairs (e.g. a game, a paired activity,

a puzzle). Further, in several whole group sessions (n = 4), students did a think/pair/share, a turn-and-talk, or worked in pairs. Turn and talk was also observed during two of the guided groups.

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Key Point C: Student grouping maximizes opportunities for students to benefit from peer models

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The following describes the various grouping formats observed.

Whole group time. During the 29 1-hour observations, almost all (n = 27) contained a whole group component which ranged from 7 to 50 minutes (Table 13). Activities during the whole group frequently included reviewing or practicing (e.g. daily agenda, calendar, counting, shapes, math concepts, text) and/or included the introduction of a new concept (e.g. new words, new math concept). A majority of teachers did most of the talking during this time. There were four paired work groupings observed during whole group time.

Guided group time with centers or independent work. All but one (n = 28) of the observed classrooms included guided groups where the teacher met with small groups of students (Table 13). In most cases, students rotated through learning centers while other students were with their guided group (n = 21). Frequently students were grouped with other students at each center, but most were working on individual tasks (e.g. worksheets, creating puzzle, computer activity/listening device, journal, language frames.) However, in some classrooms (n = 9) students worked together at centers in small groups or in pairs (e.g. a game, a paired activity, a puzzle). During guided groups, teachers did the talking the majority of the time (n = 15) or talked about half of the time (n = 13).

Independent work. Independent activities occurred during two of the observation, where all the students worked on an individual task such as a writing assignment (Table 13).
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Table 13
Student Groupings in Classroom Observations (*N* = 29)

	Grouping Format	Notes	Examples or Selection of Groups
Whole Group	Whole Group/Carpet Time (n=27)	<15min (n=10) 15-29min (n=10) >30min (n=7)	-Frequently included reviewing or practicing: the daily agenda, calendar, counting, shapes math concepts, text; or included introducing a new concept such as new words or new math concept. -Most teachers did most of the talking during this time.
	Pair Work during Whole Group/Carpet Time (n=4)		-Turn to clock buddy, knee partner, person next to you….to talk about, discuss, share measurement
Guided Groups	Guided Group with Teacher (n=28)		-Selection: most were flexible and formed based on the students' level/skill, to differentiate students by their level; a few reported that groups were formed by level in

	Grouping Format	Notes	Examples or Selection of Groups
			combination with behavior, diversity or timing of their interventions. -During guided groups, teachers did the talking the majority of the time (n = 15) and about half of the time (n = 13).
	Centers/Stations during Guided Group (n=21)		Selection: There were a variety of ways that pairs or small groups for learning centers were chosen: the same groups as the guided groups (by level) so that the groups are intact when the group has their guided time; others are a mix of language proficiency, or academic need, and some also considered behavior issues. In a couple of instances, students got to choose their partner that day, or the center/task they wanted to complete
	Centers/Stations: Independent Task (n=21)	Many grouped together, so had opportunity to chat	Worksheets, creating, a puzzle, computer activity/listening device, journals, language frames, science station etc.
	Centers/Stations: Collaborative task (n=9)	Pairs or small groups of 3-4	Game, a paired activity, a puzzle, word center, math with someone
	Independent work during Guided Group (n=7)	Not part of a center but may be seated with others	Cut and glue pictures next to labels, draw characters of book and label setting, Dreambox computer, writing assignment
Independent	Independent work whole class (n=2)	Not during guided groups but may be seated with others	Writing assignment, practice measuring

Selection of groups. Most all teachers reported that the guided groups, where small groups of students met with the teacher, were flexible and formed based on the students' level/skill; a few reported that groups were formed by level in combination with behavior, diversity or timing of their interventions.

Teachers reported a variety of ways that pairs or small groups at learning centers were chosen, such as: the same students were grouped as they were for guided groups; a mix of language proficiency or academic need; and some also considered behavior issues. In a couple of instances, students got to choose their partner, or they chose the center and were grouped with other students who chose the same center.

> *Key Point D: Instructional strategies build independence and ownership of the learning process*

- Student choice was observed in 15 of the 29 observed classrooms. One classroom had "must do" centers and "may do centers" to ensure students completed certain learning centers while also incorporating student choice. Examples of choices given included choice of: language frame, book, computer game, partner, center, subject, etc.

- Routines are another strategy to build independence among students. Routines which were easily discernable and well-followed were seen in 24 classrooms. Examples of routines included: transitioning, retrieving supplies, use of Chromebook, using classroom facilities.

Principle 4: Instructional staff effectively integrates technology

Key Point A: Instructional staff uses technology tools to engage all learners

- Teachers used technology in 25 of 29 observed classrooms. Technology was used to:
  o Explain a lesson or use interactively during a lesson (n = 17)
  o Display center assignments, concept, review calendar, weather, etc. (n = 10)
  o Play a song or video for whole group (n = 4)

Key Point B: Students use technology to display their understanding of content and to further develop their language and literacy skills in both program languages

Students in TWI schools frequently used the programs Dreambox and See Saw. Dreambox is an online math program which has regulated time so an established amount of time is met throughout the week. See Saw is a platform in which teachers can share activities with students and students can keep a portfolio.

- Students used technology in 21 of 29 classroom observations in the following ways:
  o Using a Chromebook or PC during Centers to play an interactive game (e.g. Dreambox for math) or listening to a read-along story; one included students using a listening device during Centers (n = 21)
  o Students engaging in an interactive game on Promethean Board during centers (n = 3)
  o Students coming to Promethean Board for an interactive task during whole group (n = 3)

Summary of Question 3

Instructional Schedules

All five schools delivered content instruction in both languages and strove for a 50/50 division of instruction, although the approach for scheduling varied across the schools. In four of the five schools, students received their daily instruction as one-half day in Spanish and one-half day English. In one of the five schools, students alternated their language of instruction weekly. English and Spanish teachers were paired as instructional partners in all schools and in some of the schools, there was a single model class taught by a bilingual teacher. In all five schools,

language arts and math were taught in both English and Spanish. In three of the five schools, the time spent on each content area (ELA, math, social studies and science), alternated each week by language and in one school alternated every other day. Teachers also incorporated bridging activities (i.e. bringing a Spanish and English class together for a lesson that incorporates translanguaging) into their instructional schedule with at least two schools building a regular bridging activity into the schedule. Most specials in the five schools were taught in English only. However, one school offered Art in Spanish and another offered Art in both language; another school offered Physical Education in both languages.

Classroom Observations

Teachers in all of the observed classes (*N*=29), spoke in the language of instruction all or most of the time. Instances when the language of instruction was not used usually occurred when making a bilingual connection with specific words or cognates. All of the classrooms used materials and displayed artifacts in their language of instruction. All of the classrooms contained bilingual posters or anchor charts, and many times were located in designated parts of the room. In about one half of the classrooms, other multicultural artifacts were observed (e.g. flags, maps, photos of other cultures, etc). Instruction which promotes metalinguistic awareness and metacognitive skills between both languages (were observed in 20 classrooms; instruction which incorporates cross cultural awareness and multicultural appreciation were observed in nine of the classroom observations (e.g. comparing climates, Spanish speaking regions, varying flags). Beyond the teacher guided groups, other strategies to ensure equitable participation occurred during whole group, such as using equity sticks or pair and share.

The various look-for strategies, such as sheltered instruction and other strategies, were observed in all or almost all of the classrooms. These included: making connections to prior knowledge, building background knowledge, explicitly using language frames, modeling phonics, using deliberate and repetitive speech, using nonverbal gestures or Total Physical Response (TPR), and incorporating formative assessments. Songs, chants or poems were not observed as often. References were made to at least one of the 4+1 domains in most classrooms (usually verbally).

Almost all of the observed classrooms contained a whole group lesson and guided group lessons. In most cases, students rotated through learning centers while other students were in guided groups with their teacher. The majority of teachers reported that the guided groups were flexible and formed based on the students' level/skill; a few reported that guided groups were formed by level in combination with behavior, diversity, or scheduling of the students' interventions. Opportunities for student's sustained language use with teachers were observed in all classrooms (e.g. counting and reading aloud collectively, being called upon to answer a question) and in most of the guided groups teachers facilitated active learning.

Although learning centers were utilized in most of the classrooms, most students completed independent tasks while at the center. The opportunity to converse with other students was there, but it was not necessary for students to talk to each other to complete the activity, or to purposefully work together on a task. There were some examples of students collaborating, such as students playing a game or working on an activity in centers, and there were several think/pair/share and

pair work activities observed during whole group lessons. Student choice was observed in about half of the classroom visits. The use of technology by teachers and students was frequently observed. Students were especially seen using their Chromebooks during centers to play an interactive game (e.g., Dreambox for math) or listening to a read along story.

Findings for Question 4: What were the experiences and perceptions of teachers with regard to delivery of the TWI program, including professional development and support?

In additional to providing crucial professional development, Strand 7: Support and Resources from *The Guiding Principles of Dual Language,* points out that there should be sufficient staff, equipment, and materials in both program languages to meet program goals (Principle 2, Key Point C).

The following section describes the survey responses of teachers on the implementation of the TWI program and related supports, structures and processes.

Background of Teacher Respondents

A total of 31 teachers responded to the survey; Table 14 displays specific background characteristics of the responding teachers. For the majority of responding teachers (84%), this was the first year teaching in the TWI program in MCPS. Eight of the teachers (26%) reported having additional experience teaching Spanish or in a Spanish Immersion program (in MCPS or another school district).

Over half of the responding teachers (58%) taught first grade while just over 40% taught Kindergarten. An equal number of responding teachers were English instruction teachers (45%) and Spanish instruction teachers (45%). Approximately ten percent (*n*=3) of the teacher respondents were single model teachers (i.e. taught both English and Spanish in their classroom).

Table 14
Characteristics of TWI Teacher Respondents ($N = 31$)

Teacher Characteristics		n	%
Years Teaching MCPS TWI or DLP[a]	1st year	26	83.9
	2nd year	3	9.7
	6 or more years	2	6.4
Additional experience with teaching Spanish or in a Spanish Immersion program (MCPS and/or Other district)		8	25.8
Grade Level of Instruction	Grade 1	18	58.1
	Kindergarten	13	41.9
Language of instruction	Both English and Spanish (single model classroom)	3	9.7
	English	14	45.2
	Spanish	14	45.2

[a]Includes this year in the count; DLP = Dual Language Program

Teacher Experiences and Perceptions

Comfort/knowledge/articulation of TWI program. Teachers reported on implementation of the TWI program by indicating agreement or disagreement with statements about the certain aspects of the program. Figure 11 shows the percentage of teacher agreement with survey items related to comfort, knowledge and articulation of the TWI program. Over 90 percent of responding teachers strongly agreed or agreed that they can articulate the advantages of an additive bilingual program (94%) and that they felt knowledgeable about the three goals of the TWI program (94%). Just under 90% of responding teachers strongly agreed or agreed that they felt comfortable implementing the TWI program (87%), with the majority choosing agree rather than strongly agree.
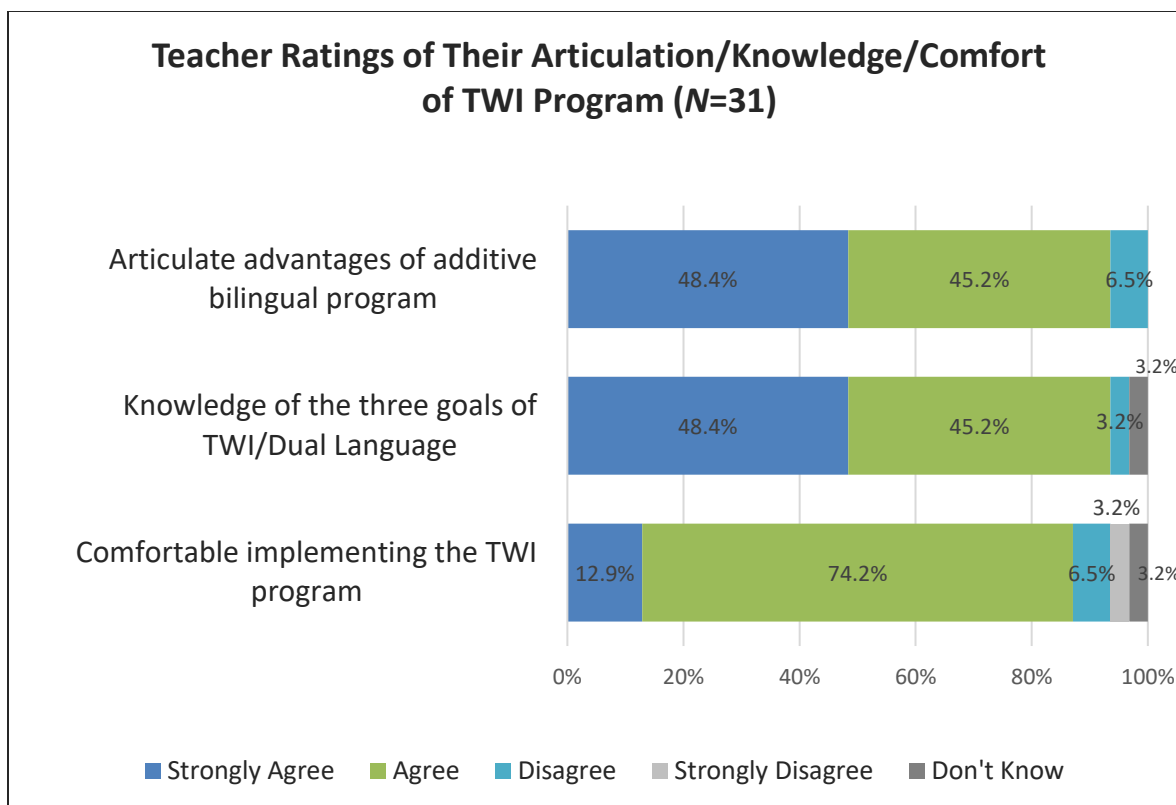
Figure 11. Teacher Ratings of Articulation/Knowledge/Comfort of TWI Program.

Support for the TWI program. Teachers rated their experiences with professional development, supports, and school culture (Figure 12). Teachers reported strong positive agreement when asked if their school administrator is supportive of the TWI program (90%). Teachers reported less positive agreement when asked if they had adequate professional development to teach the TWI program (61%), and if they had adequate materials to effectively teach in the [teacher's] language of instruction (58%). It should be noted that most of the teachers who disagreed that there were adequate materials to teach in their language of instruction were teachers in Spanish or single-model classrooms. Under one-third of respondents agreed that the dual language/TWI is a whole school culture at [their] school (29%), the lowest positive agreement across these questions.
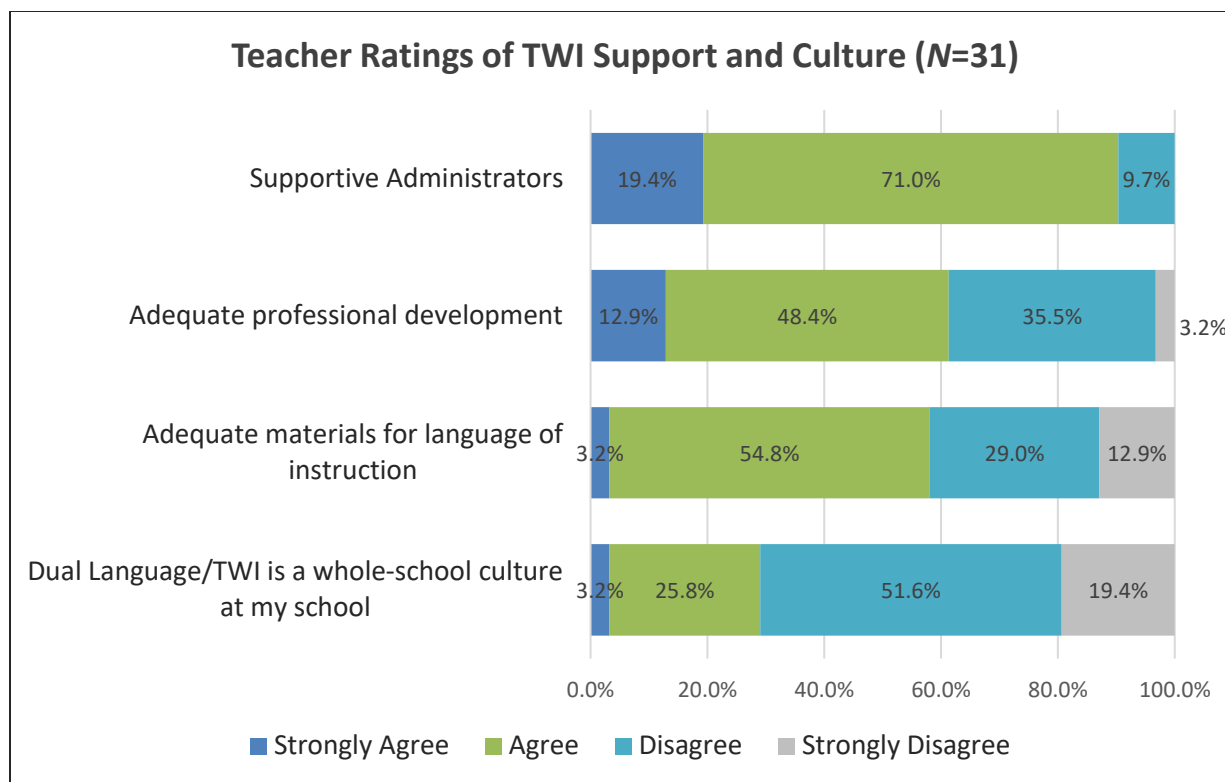
Figure 12. Teacher Ratings of the TWI Program Support and Culture.

Explanations regarding materials. Teachers who disagreed that they had adequate materials were asked to further explain in an open-ended survey question. The most frequently mentioned comments were that teachers needed more Spanish materials and spent a lot of time translating or creating materials. For example, teachers reported "Spanish materials are scarce and we have to create from scratch or adapt materials we find from other sources to fit the program" and "I had to either create/purchase materials from my own pocket to provide independent center activities, independent work, and to supplement the reading assessment." Teachers also reported that there was a lack of a Spanish curriculum and that the curriculum they use is not appropriate. Similar responses were categorized as follows ($N = 18$):

- Have to translate/create/adapt materials, need more Spanish Materials (n = 13)
- Lack of Spanish curriculum/curriculum is designed for English (n = 6)
- Not enough books (e.g. textbooks, guided reading, class library, media center) in Spanish (n = 5)
- Need online materials in Spanish (n = 3)
- Lack of consistent and accurate math assessments (n = 2)
- Materials arrived late in school year (n = 2)
- Other (e.g. Spanish assessments, bridging resources, materials with cultural aspect (n = 4)

Usefulness of PD and planning session. Teachers responded to survey items addressing the usefulness of certain activities provided by the consultant as well as collaboration with other TWI

schools. Figure 13 summarizes the responses of teachers to these survey items. Almost 90% of responding teachers reported that the one-on-one coaching provided by the consultant was extremely useful or useful (89%), with more than half (57%) rating it extremely useful. Similarly, teachers also reported that the quarterly planning sessions provided by the consultant were extremely useful or useful (93%) and the collaboration with teachers in other TWI schools extremely useful or very useful (94%).
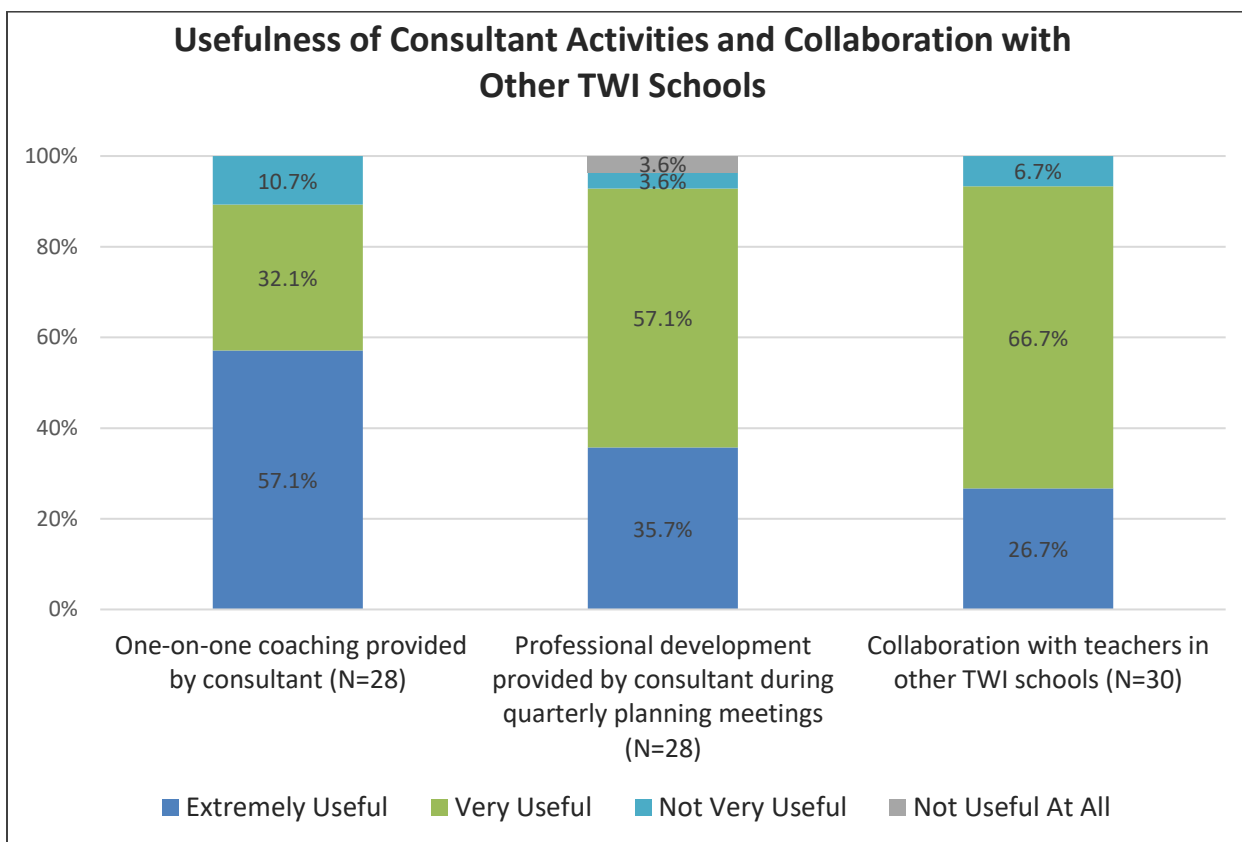

Figure 13. Teacher Ratings of the Usefulness of Activities Offered by the consultant and Collaboration with Other TWI Schools.
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Professional Development Needed. Teachers were asked "Is there any professional development not provided that you need to effectively implement instruction in the Two-Way Immersion program?" The most frequent response among twenty-four teachers who left a comment was that PD about teaching Spanish reading, writing, and literacy was needed. For example, one teacher stated "I wish there were a PD that taught how to teach reading in Spanish. (e.g. small group instruction, phonics, etc.)" and another that wrote, "I think it is really important to train Spanish teachers in the components of a literacy program/literacy block and what it is supposed to look like in Spanish…. providing solid examples as well as additional resources." Similar responses were categorized as follows:
:
- Teaching Spanish Reading, Writing, Literacy, including scope and literacy (n = 13)
- Cross-linguistic, bridging, center examples/objectives (n = 4)

- Need more "how" and foundational skills/not as much why and just collaborative piece; slow down pace of PD (n = 4)
- New reading curriculum as it relates to model and Spanish (n = 3)
- School model (n = 2)
- Give PD to whole school (n = 2)
- Other (ESOL teachers need PD, other areas like math and science, planning lessons, small group) (n = 7)

PD was also mentioned under challenges and suggestions (n = 7) and included:
- Offer PD prior to implementation
- Fit PD to the needs of school
- Offer more PD on biliteracy

Planning, Instructional Delivery and Assessment. Figure 14 summarizes teacher responses on how well several aspects the TWI program worked such as planning, assessment and instructional delivery.   Over 80% of responding teachers reported that bridging activities were working extremely well or well (86%) and that assessing student progress in English was working extremely well or well (82%). Just over three quarters of responding teachers agreed that planning instruction with a collaborative partner (77%) was going well and somewhat fewer teachers agreed that the collaboration for instructional planning was going well (66%). Lower levels of agreement were reported on questions addressing the instructional schedule. Slightly over half of responding teachers reported that the instructional schedule was working extremely well or very well (59%), while 41% rated the instructional schedule as working not very well. Questions about curriculum and assessments in Spanish received the lowest ratings across these survey items that addressed implementation of certain aspects of TWI. Over eighty percent of teacher respondents reported that assessing student progress in Spanish l (83%) was going not very well or not well at all, and that delivering the MCPS curriculum in Spanish (85%) was going not very well or not well at all.
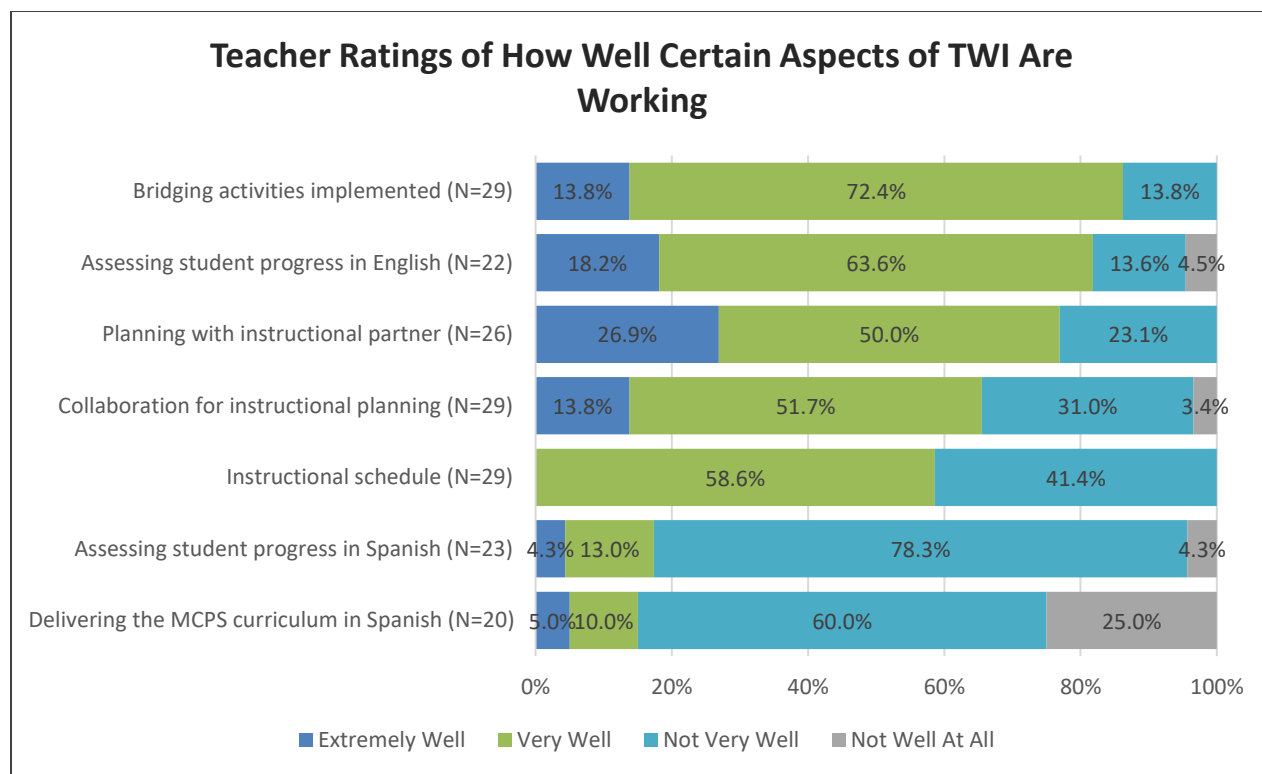
Teacher Ratings of How Well Certain Aspects of TWI Are Working

Aspect	Extremely Well	Very Well	Not Very Well	Not Well At All
Bridging activities implemented (N=29)	13.8%	72.4%	13.8%	
Assessing student progress in English (N=22)	18.2%	63.6%	13.6%	4.5%
Planning with instructional partner (N=26)	26.9%	50.0%	23.1%	
Collaboration for instructional planning (N=29)	13.8%	51.7%	31.0%	3.4%
Instructional schedule (N=29)		58.6%	41.4%	
Assessing student progress in Spanish (N=23)	4.3%	13.0%	78.3%	4.3%
Delivering the MCPS curriculum in Spanish (N=20)	5.0%	10.0%	60.0%	25.0%

Figure 14. Teacher Ratings of How Well Certain Aspects of TWI Are Working.

Explanations of why certain aspects were not working well. Teachers were asked to explain why they rated a certain aspect "not very well" or "not well at all." For assessing student academic progress in Spanish, explanations for it not working well were: a lack of appropriate assessments, confusion about assessment expectations, and too much assessing, which cuts into instructional time. For delivering the curriculum in Spanish, the reasons given for this not working well were: the curriculum is not Spanish friendly, should not just translate the English curriculum, much time is spent creating or finding materials, and limited resources in Spanish. For the instructional schedule not working well, explanations were: there's not a 50/50 division, the afternoon gets short-changed, there's not enough time to teach all the needed content in a half day, and students should get both languages everyday (not weekly). Table 15 displays the examples of responses given for each of the aspects.

Table 15
Examples of Why Certain Aspects Not Working Well

Assessing student academic progress in Spanish (n = 15)
Lack of appropriate assessments   • *English has so many tools to help monitor progress, Spanish has one in reading and none in math because MAP gets taken in English.*   • *There was no all-around academic progress for teachers other than Fountas & Pinnell.*   • *It seemed like there was not enough assessments in Spanish. It felt like the majority of assessments were given in English: MAP growth, MAP-RF, mClass, and two of the quarterly assessments.*

Confusion
- *There has been a lot of confusion about assessment in Spanish. Decisions are made about what to assess and when to assess and then those decisions get changed. Each school gets a different message. If we want to be able to compare data and correlate it to like data, then there needs to be one decision for all of the schools.*
- *It was unclear to me what to assess and what was an expectation for reading and writing in Spanish.*
- *One district math assessment was wrongly translated and it was not corrected by the end of the quarter, even though it had been brought up at the beginning of the quarter.*

Time
- *Too much 1:1 testing detracting from teaching time.*
- *Being a single model teacher doesn't allow me to assess my students' progress in both languages without having a negative impact on my instructional time.*

Delivering the Spanish Curriculum (n = 12)

Lack of appropriate curriculum/materials
- *The MCPS curriculum is a monolingual English curriculum. Therefore, it is not Spanish-friendly.*
- *The curriculum was not written to be taught in a dual language program.*
- *As stated before if you want a curriculum taught in Spanish the resources have to be there in that language. It is not just translating it. There are task in reading and writing that don't apply to Spanish and tasks in Spanish that don't apply to English.*

Time spent creating/locating materials
- *Although some worksheets have been translated to Spanish within the MCPS curriculum, most lessons have books, games, online resources, etc. that are not in Spanish and we cannot use. We have to find everything on our own hoping we can access something similar.*
- *The Spanish teachers/facilitators have a lot of extra work to find materials, adapt the curriculum to meet the needs of Spanish language learning.*
- *There is not enough time! Spanish teachers had to translate 90% of the materials or create them on their own while English everything has been developed and laid for.*

Lack of resources/materials
- *There is a lack of resources for Spanish which takes away time from our planning time to create these resources. Sometimes the translation for the Spanish materials is hard to understand or a literal translation which doesn't get the meaning across well in math word problems (specific example of a curriculum piece).*
- *Many materials bought by my school were ordered over the summer but arrived late in the school year. The limited resources available online for students to listen to books, limited students' abilities to develop their language skills when not working directly with the teacher. There are few large books in Spanish for whole group instruction that were non-fiction books with a variety of text features, including books for Science.*

Instructional Schedule (n = 9)
Not 50/50   • *The instructional schedule does not adequately provide 50/50 time for either language.*   • *We divided the morning and the afternoon class equally however there seems to be less time in the afternoon.*   • *Instructional schedule- on paper the time for the afternoon class and morning class in the same but in reality with interruptions for specials and other events one of my classes always has less time. Also there is no way to teach double the curriculum in the same amount of time. Teaching literacy in two languages with the same expectations in both in the amount of time allotted is just not doable. Same reading and writing block but now have to produce twice as much, is just hard on both teacher and kids. So much has to be cut. This affects especially science.*   *Other Allocation of Schedule*   • *The weekly schedule… too unpredictable for the students. They should be hearing English and Spanish every day.*
Collaboration for instructional planning/planning with instructional partner (n = 6)
• *Not effective in Dual Language as it is done in monolingual settings*   • *Current collaborative planning does not allow for the flexibility necessary for TWI. We need to work with same-language peers AND TWI partners. Planning that is tailored for the specialists is NOT ideal*   • *We spent our common planning filling out a planning template, with objectives, strategies, and vocabulary. We did not look at student data (often enough), nor looked at student work for trends, nor model strategies or parts of a lesson, and sharing materials/resources was limited. This made planning unproductive and disconnected from the needs of our classrooms*
Bridging (n = 2)
• *At beginning, there was not professional development to know how to implement….we just tried things until we found what worked for us.*   • *I think my partnership did a good job with bridging, but I think we could do more!*

Note. Not all teachers responded with an explanation; teachers may have given more than one reason for more than one aspect

What works well. Teachers were asked in an open-ended question, "What is working well with TWI?" Twenty-five teachers left comments which included):

- Staff commitment/teamwork/excitement (n = 9)
- Student growth in learning languages (n = 8)
- Connecting/bridging two languages (n = 6)
- Increased student engagement/confidence (n = 5)
- Learning culture/value of other languages (n = 5)
- Professional development/coaching provided (n = 3)

Challenges and suggestions. Twenty-six teachers left a comment regarding challenges and/or suggestions. The most frequent response was the need for a Spanish curriculum, scope and sequence and materials. For example, teachers reported "the curriculum isn't appropriate, it doesn't

use a dual language lens" and "get a curriculum designed for [dual language] so that teachers do not have to rely on non-research supported activities…or at least something that lets teacher know what to look for on those websites… I feel like I am wading through water collecting bits and pieces and offering them up to them as I come across them instead of a logical sequence." Categories of similar responses are as follows:

- Need a Spanish curriculum/scope and sequence/materials (n = 10)
- Too much testing/streamline testing (n = 7)
  - Not equal between languages, testing for two groups of students in half days
- Additional PD needed (n = 7)
  - Fit to needs of school, more on biliteracy, need prior to implementation
- Need teacher/classroom support (e.g. Spanish support, special education in Spanish) (n = 5)
- Overwhelmed, too many initiatives/expectations (n = 5)
- Need more district support/answers to questions (n = 4)
- Dual language may not be for everyone (n = 3)
- Concern about instructional model/schedule (n = 3)
- Planning time needed (n = 3)
- Other (n = 5)

Impact on instruction. Teacher respondents were asked, "how has implementing Two-Way Immersion changed your instruction?" Nineteen teachers responded which included the following:

- Changed mindset about language learning/more additive approach/incorporating translanguaging (n = 7)
- Understand language acquisition more/balanced literacy/increased strategies (n = 5)
- Time allocation/prioritizing/finding time/more prep needed (n = 5)
- More collaboration with other teachers (n = 3)
- Other (n = 3)

Summary of Question 4

Most of the 31 teacher respondents (84%) were in their first year of teaching in the TWI program. Eight have had experience with teaching Spanish or in a Spanish Immersion program; of those, seven were Spanish or bilingual teachers in the TWI program. Most responding teachers reported that they can articulate the advantages of an additive bilingual program, are knowledgeable about the three program goals, feel comfortable implementing the program, and believe their administrator is supportive of the program. Over half of the respondents agreed they had adequate professional development to teach the TWI program (61%), and they had adequate materials to effectively teach in the [teacher's] language of instruction (58%). Of the teachers who reported there were inadequate materials to effectively teach in the language of instruction, most were Spanish or bilingual teachers; they further explained that they have to create or translate materials in Spanish and that they need a Spanish curriculum, materials and books. Additionally, less than one third of responding teachers agreed that Dual language/TWI is a whole school culture at [their] school.

About 9 out of 10 responding teachers reported that the one-on-one coaching, professional development during the quarterly planning meetings, and collaboration with other TWI teachers was extremely useful or useful. Teachers also conveyed in an open ended question that they would like more professional development to include teaching Reading, Writing, and Literacy in Spanish, including scope and sequence.

Over 80% of responding teachers rated that bridging activities and assessing student progress in English were working extremely well or well. Over three quarters of teachers agreed that planning instruction was going well while slightly fewer teachers reported that the collaboration for instructional planning was going well. Just over one half of teachers reported that the instructional schedule is working extremely well or very well; 41% reported that it is not going well, mostly because there is not a true 50/50 division of content time between the languages. Further, teachers conveyed in response to an open-ended question that the following aspects were working well: staff commitment/teamwork/excitement, student growth, connecting two languages, student engagement/confidence and learning the culture/value of other languages.

Ratings for assessing student progress in Spanish and delivering the MCPS curriculum in Spanish were the lowest of all survey items with 83% and 85% reporting that it was not working well mainly due to the lack of appropriate assessments and a curriculum in Spanish. Teachers reported the following challenges and suggestions: need a Spanish curriculum/scope and sequence and related materials; too much testing and testing is not equal between languages; need additional PD; need additional classroom support and there are too many initiatives/expectations. When asked how TWI has changed their instruction, some teachers reported that it has positively changed their mindset about learning a language; their understanding of language acquisition and strategies; and their need to allocate time and prioritize.

Findings for Question 5: What were the experiences and perceptions of school administrators with regard to delivery of the TWI program?

As with the successful implementation of any program, it was important to get the principal views and experiences. Furthermore, the authors of *The Guiding Principles of Dual Language* report that in schools with successful programs, there should be a clear commitment to continued language development in the program by district administrators and that at the school level, supportive principals are critical (p. 123). Furthermore, *The Guiding Principles of Dual Language Education* states that the program should have strong, effective, and knowledgeable leadership (Strand 1: Program Structure, Principle 3) and the program is supported by all stakeholders (Strand 6: Supports and Resources, Principle 1).

All five principals were interviewed for the purpose of examining the principals' perspectives and experience with the implementation of the TWI program at their school. Four of the five principals were their school's principal when TWI was first implemented; one has been principal for 18 years and three were in their fourth or fifth year. One principal was in their first year as principal of the school (the TWI the program was implemented the prior year).

Knowledge, training and support among principals

Dual Language knowledge. Most principals reported that they were very knowledgeable with the concepts of dual language and TWI; one principal reported that they can now identify cross-linguistic connections during teacher observations. Another principal stated they are more confident about their knowledge of dual language education than when they started, and another principal revealed that it has been a steep learning curve. At the same time, two of principals pointed out that they are not where they want to be in terms of their knowledge and that they want to learn more in order to be confident with making decisions about staffing, interventions, special education, and other issues.

Training and support. The principals reported that they've received great support from the consultant and MCPS program staff stating "there are people to answer my questions;" and "[The consultant] is amazing…the opportunities that we've had to share about the practice and theory and has been very resourceful for me"; but administrators voiced that they also wished they had even more support. Most notably mentioned was a need for more professional development among the administrators such as: administrator trainings that occur before teacher trainings and more time with each other and with the consultant to discuss implementation and learn from each other. One principal explained, "Administrators need time to talk about leading these programs…there are still questions to be answered." Some principals noted that much of the learning has been on the job and figuring it out as they go. Some revealed that if they had known what they know now, they would not have made some of the same initial implementation decisions, such as: teachers alternating content every other day (vs. weekly) and using orange as a designated language color (too difficult to find supplies). It was suggested that principals with more TWI experience be a resource to other principals (even if experienced principals are outside of MCPS) and that principals should be attending applicable conferences for professional learning and for networking with other dual language districts. One administrator revealed that they found a gap between the theory that was provided by professional development and the need for more about the application; the principal further explained, "As a system, we need must-haves, negotiables, and non-negotiables to start a program; to go from theory to application was a real struggle" and "there needs to be a systematic way of implementing."

Other resources used. Two principals mentioned that they purchased and read books on their own about dual language, including involvement in a book club for TWI principals. Additionally, a principal relayed that they have been in contact with school districts outside the state of Maryland to ask about their experience with a Dual Language program.

Training and support among teachers

Some of the principals reported that the quarterly training provided to the teachers has been helpful; one administrator specifically pointed out that it was the one-on-one coaching sessions that have been the most helpful and crucial for teacher learning. In fact, concern was raised about how this would continue with the increasing number of teachers and it was suggested that administrators or central office staff eventually be trained to conduct one-on-one observations and

feedback. One principal reported that they would be struggling without the coaching and training sessions with the consultant.

In one interview, the principal pointed out that their appropriate grade level ESOL teachers also attend the quarterly trainings as well as Resource Teachers and Academic Intervention Teachers when the training is on-site. Another reported that they were able to use their Title I funds for extra planning time for the teachers. A suggestion was made for professional development to be offered on teaching reading in Spanish.

Principals reported they have received materials and even extra funding for materials, which has been helpful; however, they reported that they could still use more materials and that the teachers or reading specialists still have to develop and translate materials in Spanish themselves. Some concerns were raised about whether there will be sufficient funding for materials in the future.

School processes and structures

When Principals were asked if they had any specific processes or structures in place to support the TWI implementation at their school; a variety were mentioned.

4+1 domains. As featured in the professional development provided by the consultant, two principals communicated that they have implemented the 4+1 domains in their schools' classes so that everyone understands the importance of using them and helping students engage in student discourse. One of the principals explained, "there is a high focus [using 4+1] in K-1 but [also] a focus in Grades 2–5."

Master schedule. The master schedule itself was mentioned as "what drives everything and how it happens"; for example, the way that specials and lunch are scheduled into the days while assuring that there is 50/50 allocated time on instructional content in each of the languages.

Report card addendum. The schools had to create an addendum for the report card to give grades for Spanish instruction; a report card specifically for the TWI schools has since been created.

Other processes and structures. Other processes and structures mentioned by at least one principal included: collaborative teacher planning twice a week which include both ESOL and special education teachers, creating a glossary of TWI terms for reference, reflecting with staff on their pitfalls and what they can do differently in the future, regular communication to the community, creating a monitoring tool for administrator observations, and using Title 1 money for teachers to conduct peer reviews and share ideas with each other.

Successes and school culture changes

Student engagement and confidence. All of the principals reported they see success of the program reflected in the students with most pointing to increased student engagement and confidence levels; one principal conveyed that their students have amazing scores in both math and reading. Examples given were: "Kids are risk takers…they are excited…99% of our kids totally embrace it," "It's taken away the silent periods from those who are new English learners…[through the

bumpy implementation], students have been a strength and have flourished," "I saw a Kindergarten student who I knew struggled in math using Spanish to explain a concept–he was engaging in that lesson…and another student, who speaks French, reading and asking questions in Spanish to a new student," "We saw children attempting things they had not attempted in the past, like nonsense words." One principal expressed that students are now more proud of their culture and take pride in speaking more than one language. For example, "[Previously] I would get a Spanish speaking student to try and help me translate and they would claim they only speak English. They were ashamed and felt like they shouldn't speak it. Now I see the level of confidence and excitement from our children. Everyone is just excited to be speaking two languages. Throughout the school everyone wants to be identified as I speak Spanish and it's made a huge difference in our climate, environment, and community."

Parent involvement. Some principals pointed to parent interest and involvement as successes of the program, stating they are giving feedback that they love the program and are becoming more involved, "Spanish parents are happy that things are now coming home in Spanish and they can help their children…they feel more welcome." One principal expressed that the culture has changed in that parents are now more involved and volunteering more often; they are feeling welcomed and part of the community where they can give back.

Teacher excitement and mindset. Teachers' excitement was also reported by some principals; one reported, "Teachers have shared with me they feel empowered." One principal explained that it has given the staff a forum to talk sociocultural competencies and there has been a mind shift with staff in how they approach instruction as well as communicate with the community. One principal noted that having TWI has changed how they approach morning announcements, how they plan reading nights and PTA meetings, and how they support families. Another principal reported there is now less division between the dual language and the monolingual staff.

Challenges

Staffing. All principals reported that staffing was a challenge declaring "it's a struggle" and "it's been tough." A principal explained "You cannot always assume because a person is bilingual that they can teach in Spanish and switch between two languages. We've had teachers who were strong in Spanish and couldn't pass PRAXIS," and another said "the person teaching in Spanish has to be versed in academic language that is very different than conversational language." Some of the specific examples of staffing challenges were as follows:

- Finding and hiring qualified staff, including hiring Spanish-speaking teachers, even though the pool has increased compared to previous years. Although Human Resources was praised for working with TWI schools in hiring such as increasing the pool of candidates (e.g. recruiting in Puerto Rico) and allowing for early hiring with Title 1 schools (if not Title 1 already), there were some reports of a need for stronger support and a higher priority given to TWI in regards to hiring. For example, have a more aggressive approach when it comes to hiring applicants to assure MCPS gets qualified staff and doesn't lose them to other districts; assure that positions such as specialists, are bilingual; and keep in mind future hiring needs as TWI expands to the higher grade levels so that there will be Spanish-speaking, qualified teachers in place.

- Having to facilitate involuntary transfers removes some of the strongest teachers in the school. Furthermore, the involuntary transfer process can lower morale and create anxiety among the staff this time of year. One principal noted that many teachers are leaving because they are either fearful of the TWI program, or they are pre-emptively leaving knowing that there will be future involuntary transfers and they may not qualify.

- Getting Spanish-speaking substitute teachers was also revealed as a challenge.

- Continuing to build the Spanish speaking school staff (e.g. support staff, specials teachers) was a goal mentioned by principals

Instruction and Assessment. The lack of curriculum, literacy instruction, and assessments in Spanish were reported as challenges.

- Lack of a Spanish curriculum or a sequence for Spanish instruction was reported as a challenge. One principal expressed that "the curriculum does not support the work because there are a lot of translations that teachers have to do on their own…it should be embedded in the curriculum." Another principal noted that teachers have had to make their own materials and "it's not because there's a lack of materials that exist, it's because of the process. But [we figure it out and made decisions]…the Reading Specialist has spent a lot of time." Additionally, a principal communicated that their school is not in either cohort to implement the new Benchmark curriculum next year and this is creating angst amongst staff.

- Figuring out reading instruction and interventions in Spanish and understanding that reading instruction in Spanish is completely different than English translated to Spanish was also reported as a challenge. One principal stated, "…a lot of our struggle has been around Spanish literacy and Spanish foundations [in reading]."

- The lack of assessments in Spanish was reported as a challenge.

- Concern about Evidence of Learning (EOL) cut scores, reading levels, and report card grades accurately reflecting the where TWI students should be was remarked as challenges.

Clearer direction and planning. A need for clearer directions and planning from MCPS, especially in terms of implementation and getting all administrators trained ahead of staff, as was previously mentioned, was reported. The district should "work out all the details beforehand and commit to what has been said….need to hold off [communicating and implementing] until we are ready and confident" explained one principal. Another pointed out, "It will always benefit us is to slow down and have all training ahead of time… so we know what resources we need to order and have a plan in place." Further elaborating, the principal stated "Having to do a supplemental report card for Spanish the first year made it seem like the program was an afterthought. Slow down and do your research before you jump into it." One example given was that knowing the best implementation model to use, prior to rolling out, would have been helpful and reduced challenges. Additionally communicated was a need for invested interest and acknowledgment by executive leaders (beyond

a quick visit); as explained this way, "It's hard to make decisions about the program when you haven't been there."

Other challenges. A variety of other challenges were mentioned by one or two of the principals interviewed.

- *Single model classrooms*. It was expressed that single model classrooms are very difficult, as reported by one principal, because it is challenging to plan, to switch in the middle of the day, reading levels are not the same across Spanish and English, and it is overall mentally strenuous for those teachers. "Single models are not ideal, so why are we doing it?" was the question posed.

- *Interventions*. The concern was raised on how to provide students with interventions when they aren't available in Spanish. For example, "If special education teachers don't speak Spanish, do I pull a student out of Spanish to give them the reading intervention in English when it's Spanish week? Or do we just give the intervention every other week, but we can't because it's [documented] on the IEP to give it weekly - It's a puzzle."

- *Late entry*. A concern about what to do with late entry by students was raised, "Principals want students to be able to go to their home school, but how do we support students who enroll after Grade 2 and don't have those foundational skills? It gets more and more complex as it goes up in grades.….Parents are told there is a sister school they can go to if they opt out."

- *Management of program*. One school found significant challenges with rolling out two grades of TWI at once, while also managing other school programs. It was suggested that future TWI schools not start with implementing two grades at once.

- *Future of Dual Language*. A question was raised, "What happens to the cohort in 4 years because they will be bi-lingual and bi-literate and entering middle school?"

Parents and community

Several of the principals communicated that the program has been "well received," that the "community embraced it," "community wanted the program" and "parents are happy to be able to help their students with school work." At the same time, a couple of principals described encountering resistance from some parents and staff. In one case, some community members voiced that they were upset with how the program was rolled out, mainly in terms of inconsistencies with what was being communicated by MCPS in how the program would be implemented throughout the grade levels and who would be allowed to enroll or opt out of the program. Additionally, some principals reported that there have been numerous questions from parents prior to enrolling their student; many principals offered tours and open houses for incoming kindergarten parents. One principal explained "this is the third month I've had a tour for incoming kindergarten parents because they don't understand it" and another relayed, "I spend a lot of time selling the school and the program because I believe in it." There have also been parent informational meetings held by the consultant at a couple of the schools, where he explained dual immersion and answered parents' questions. Although principals gave some examples of parents who were not convinced to enroll their student in TWI, a few principals communicated that once

parents heard and observed the program, they were excited about TWI. Similarly, some parents who were reluctant about TWI at first now love the program and pass this information on to incoming parents.

Future implementation changes

Staffing. Some reported that next year they will have more Spanish-speaking teachers on their staff such as art teachers and reading intervention teachers. Furthermore, schools were each allocated an additional .5 position for next year and the schools are using it in various ways such as: creating a dual language instructional coach; creating a position to support second graders who aren't native Spanish speakers and need foundation skills (e.g. late entry students). Some mentioned that although they are grateful for this new allocated position, it is difficult to hire a .5 position, and in many cases it replaces a position which was taken away previously.

Curriculum and interventions. One school will be adopting the new Benchmark curriculum next year and two schools mentioned that they will be adopting interventions for Spanish Language Arts.

Rollout to next grade. All schools will be rolling out TWI to the next grade level next year. One principal reported they will be getting input from current TWI teachers to help with that rollout to the next grade.

New instructional class format. One school is considering combining K–Grade 1 classes so there are no single model classrooms; there would be K–Grade 1 English teachers and K–Grade 1 Spanish teachers.

Summary of Question 5

Most of the principals reported that they were very knowledgeable with the concepts of dual language and TWI, and that they've received great professional development and support from the consultant and the MCPS program staff. However, there is still a need for more professional development and collaboration among the TWI administrators, specifically about the implementation of the program so that they can make more informed leadership decisions; some principals reported that there was a lot of figuring it out as they go. It was suggested that principals with more TWI experience be a resource to newer TWI principals and that administrators should be attending dual language conferences for professional learning growth and networking.

Principals reported that the one-on-one coaching sessions for teachers were especially valuable and that the quarterly teacher training was helpful; however, there was some sentiment that the afternoon planning sessions were not very helpful. Some schools were able to use extra funding to support the implementation of TWI (e.g. materials and PD), but concern was also expressed about the future of funding for materials and professional development. Besides creating a master schedule that centers around a 50/50 division of language instruction, principals cited other ways in which they have supported TWI in their schools such as: implementing the 4+1 domains throughout all the grade levels;; creating an addendum to the report card; scheduling collaborative

staff planning; creating a TWI glossary; reflecting on implementation with staff; communicating regularly with the community; creating an observation tool; and implementing peer reviews and sharing of ideas among the teachers.

All of the principals reported they see success of the program reflected in the students, especially with increased student engagement and confidence levels among Spanish speaking students. Some also reported that parent interest and involvement has increased and teachers are excited and feel empowered. A couple of the principals conveyed that the culture has changed with how they approach morning announcements and support to families. At the same time, some principals also reported challenging experiences with resistance from parents and community and noted that the principal spends a lot of time selling and explaining the program, and answering questions.

The three primary areas of challenge reported by the principals were: a) staffing, b) lack of Spanish curriculum/materials/assessments, and c) need for more clear direction and upfront planning. Staffing challenges included: hiring and building qualified bilingual staff (including support staff), managing staff anxiety due to changes, and having enough teachers for paired teachers and eliminating the single model classroom. The lack of a curriculum and materials in Spanish has been a challenge because staff has spent a lot of time finding and making their own materials and there has been also been a lot of struggle surrounding Spanish literacy foundations. Principals pointed out that understanding instruction in Spanish is different than translating words from English to Spanish. Also challenging was the lack of assessments in Spanish and accurately reflecting student progress through EOL, reading levels, and report card grades. Finally, principals report a need for clearer direction, upfront planning, and support from MCPS, especially in terms of implementation details and getting all administrators trained ahead of staff; in particular working out all the details, such as the instructional model, before implementation. Other challenges reported by one or two principals were: implementing interventions in Spanish, addressing enrollment of students into the program, managing the program along with other school priorities, and addressing the articulation of students after elementary school.

Conclusion

Similarities and differences in school characteristics and TWI structure

Across the TWI schools there were notable differences: schools varied in school characteristics, staffing, and their approach to scheduling. Most of the schools had similar enrollment sizes (482 to 579 students) with the exception of one much larger school, which had 892 students. Further, there was one school which had a much lower percentage of FARMS, ESOL, and Hispanic/Latino students than the other schools. The number of ESOL teachers allocated to schools differed, and the way ESOL teachers were utilized in TWI varied. Most notably, two of the schools did not have their ESOL teachers supporting students whose first language is Spanish, allowing the TWI program to serve that role. Schools also differed in how many years they've been implementing TWI with two schools also implementing an existing Spanish immersion program in higher grades. Furthermore, schools had varying approaches to implementing the instructional schedule in their school. In four of the five schools, students received their daily instruction as one-half day in Spanish and one-half day in English with most students changing their classroom and teacher mid-day. In one of the five schools, students alternated their language of instruction weekly.

Additionally, although all the schools had paired English and Spanish classroom teachers, some schools also had a single model class taught by a bilingual teacher to address the odd number of classes.

Across the five TWI schools, all demonstrated a strong effort to implement a 50/50 division of instructional content in each language. Each school, however, varied in how they accomplished this given the challenges of scheduling specials, lunch, recess and the content time allocations. Some staff expressed that, in reality, they did not think their school schedule worked well or felt their schedule met the 50/50 model, with the afternoons especially being affected. Due to the allocated time for specials and/or the scheduling of a standard time for a bridging activity, and interruptions that may occur in a typical afternoon, students may receive fewer minutes of instruction in the language taught during the afternoon. Some schools have tried to address this by alternating each marking period or semester the order in which students receive their Spanish and English instruction.

Although the school's characteristics influence the school schedule and dual language structure, several staff members, including school leadership, expressed the need for more guidance and consistency across schools in terms of the best format and approach to implementation. This includes consistent decisions and messaging from MCPS central office. Implementation direction and guidance continues to be a need as school leaders explore the best approach for TWI implementation as it rolls out to subsequent grade levels.

Planning

Like other elementary schools, TWI schools plan weekly by grade level team. In addition, TWI schools plan with language alike teachers and paired partner teachers. Further, each quarter, grade level staff from all five schools met with each other and the consultant for quarterly planning and professional development. Schools varied in how they scheduled and allocated time for planning, with some schools able to provide additional planning which staff value and fear they may lose in the future year(s) to come. Teachers also reported that collaborating with teachers in other schools was an aspect they found useful.

Observed instruction

Almost all of the classroom observation look-fors designated for this study were observed during the sample of classroom visits. These included: classroom artifacts in the language of instruction; bilingual artifacts, such as class created anchor charts and cognate posters; opportunities for student sustained language use (mostly observed with teachers); reference to language domains during instruction; instructional strategies such as use of visual and nonverbal gestures, connections, building background knowledge, use of language frames, using deliberate speech, check for understanding; and use of technology by both teachers and students.

Areas that were not observed as frequently were: purposeful student groupings and collaborative tasks among students (as opposed to sitting in a group arrangement while working on individual tasks); cross cultural awareness during instruction; hands-on physical use of 4+1 visual cards; and

songs and chants. These areas may need to be examined as to whether more focus would be beneficial and appropriate for this age group (i.e. Kindergarten and Grade 1).

Positive experiences

Administrators cited excitement and determination among much of their staff, along with increased student confidence and engagement, increased parent involvement and change in school culture. This view, as well as staff buy-in, was echoed in teacher survey ratings where almost all reported that they could articulate the advantages of an additive bilingual program; they have knowledge of the three goals; and are comfortable implementing the TWI program (although fewer teachers gave the highest rating of strongly agreed, showing room for growth). Teachers also self-reported staff commitment, teamwork and excitement in addition to student growth, engagement and confidence as areas that are working well. They also reported positively on the professional development provided, especially the one-on-one coaching, and collaboration with teachers in other schools. Some administrators and teachers have stated that the guidance and professional development received by the consultant has been crucial to their learning and implementation. Finally, teachers revealed that being a TWI teacher has changed their mindset by increasing their understanding of language acquisition and strategies.

Areas of Need

Several challenges related to curriculum, materials, and assessments were disclosed during this first implementation study. One area of need expressed most often by teachers and administration, was the lack of a Spanish curriculum, as well as a related scope and sequence and materials in Spanish. It was explained that translating and finding appropriate materials in Spanish has created substantially more work for staff. The Guide states that "curriculum should provide a scope and sequence for initial literacy development in the partner language that specifically addresses the literacy skills needed to read and write in that language rather than simply mirroring the teaching of English literacy" (Howard et. al., 2018, p. 33). Similarly, staff also communicated the need for additional professional development related to teaching Spanish reading and literacy.

The lack of assessments in Spanish, the lack of clarity regarding availability and expectations of Spanish assessments, and the overall amount of testing were reported challenges. Assessments in Spanish are needed to accurately measure all students' progress in Spanish. Further, there was confusion about what Spanish assessments were available and expected. Also, teachers declared that the responsibility for testing was unevenly distributed and fell more upon the English teachers than the Spanish teachers because most testing is done in English. This was especially challenging because they are responsible for two groups of students and testing encroached even more on the English instructional time.

Administrators also conveyed the need for more support regarding hiring qualified staff, with long range planning in mind. They also highlighted the need for more opportunities for their own professional development as well as more opportunities for implementation planning and collaboration with other dual language districts.

Recommendations

Systemwide Implementation

1. Examine areas where it might be beneficial to systemize implementation across the schools (e.g. schedule structure, utilization of ESOL teachers) in order to assure approaches are optimized and staff have a clear and consistent understanding regarding key implementation decisions.
2. Support school leadership in obtaining an equal distribution of daily language instruction by exploring best practices within MCPS and in non-MCPS school districts with TWI programs.
3. Consider eliminating the single model classroom in order to have an equal distribution of paired Spanish and English teachers in each school; staff feedback reported that having a single model approach is challenging.
4. Strengthen support provided to school administration in terms of clear messaging for implementation. It is important for staff and parents to receive understandable and consistent messages regarding how the TWI program will be implemented (e.g. enrollment of students including siblings, late arrivals, and vertical enrollment for students). In addition, it is important for school administrators and staff to have the support from central office to deliver information regarding TWI implementation.
5. Examine the number of assessments given to students in the TWI program. Also examine the balance of assessment responsibilities between the Spanish and English teachers, not only in terms of the amount of responsibility for each teacher, but also in terms of the impact on instructional time between English vs. Spanish classrooms.

Curriculum, Assessments, and Resources

6. Assure that there is an authentic Spanish curriculum, and related scope and sequence that comes from a bilingual, not a monolingual, lens.
7. Seek ways for schools to obtain more materials in Spanish, reducing the amount that staff need to create. This includes more books in Spanish for classroom instruction, classroom independent reading, and the media center.
8. Assure that there are multiple measurements for assessing student progress in Spanish. This will benefit both students for whom Spanish is their first language and for whom Spanish is the language they are newly acquiring. This also will help identify students in TWI who may have learning disabilities. Balance this recommendation with the need to stay within the limitations in assessment time as mandated by the Maryland General Assembly.[5]
9. Establish clear communication to school staff about assessment availability, scheduling and expectations.

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[5] The More Learning, Less Testing Act of 2017, H.B. 461 was enacted by the Maryland General Assembly and stipulates that that amount of time in schools that can be devoted to federal, state or local mandated assessments will be no more than 2.2% of the minimum required instructional hours.

Professional Development and Support

10. Provide additional PD and resources (e.g. online courses or webinars) on Spanish literacy and reading for the applicable grade levels. *The Guiding Principles for Dual Language Education* states that essential training should include literacy instruction and teachers should be have a deep understanding of how to provide authentic primary instruction in the partner language (Howard et. al., 2018, p. 93). This particular PD may need to be additional to the PD provided from the consultant.

11. Provide separate PD opportunities for the TWI administrators and increase opportunities for communication and collaboration among the TWI administrators. The PD should include guidance on implementation, and collaboration should include discussions regarding implementation decisions and issues that administrators face.

12. Seek opportunities for TWI administrators to network with dual language experts and other districts implementing dual language programs (e.g. conferences, meetings, work groups, etc.)

13. Examine ways to provide more staff planning time, or to protect existing structures that support extra planning time. Feedback and literature shows that planning is an important aspect of successful implementation.

14. Continue to seek and increase methods in which staff across schools can share their materials, tips, and resources (e.g. some principals and school contacts have created internal implementation tools).

Staffing

15. Increase efforts to hire bilingual classroom teachers, teachers for specials, and supporting staff, while taking into account the schools' future staffing needs as TWI is rolled out to the next grade levels. This requires Human Resources staff to understand and adopt approaches to accommodate schools' future needs as well as their immediate staffing needs. This also includes continuing, and even increasing, efforts by the Office of Human Resources and Development to attract and recruit qualified staff for the TWI schools.

Reinforcing Instructional Delivery

16. Increase ways in which students work together (as appropriate for the grade level), such as collaborative tasks within learning centers or paired work; observations found that students were not frequently in groupings where they were tasked with working together.

17. Increase student choice (appropriate for grade level) in order to build independence and ownership of the learning process.

18. Communicate expectations for modeling the language of instruction, including when it's suitable to make bilingual connections.

Acknowledgements

Appendix A

Two-Way Immersion Elementary Programs

During the 2018-19 school year, there will be five locations in Montgomery County Public Schools offering Two-Way Immersion (TWI). All students entering kindergarten in these schools will participate in TWI. Some sites currently offer TWI in additional grade levels. The implementation of TWI will roll upward throughout the grades during subsequent years until all classrooms at all grade levels in these schools follow the TWI model. More TWI programs are expected to open in MCPS in the future.

Brown Station Elementary School
851 Quince Orchard Blvd. • Gaithersburg, MD 20878
www.montgomeryschoolsmd.org/schools/brownstationes/

Kemp Mill Elementary School
411 Sisson Street • Silver Spring, MD 20902
www.montgomeryschoolsmd.org/schools/kempmilles/

Oakland Terrace Elementary School
2720 Plyers Mill Road • Silver Spring, MD 20902
www.montgomeryschoolsmd.org/schools/oaklandes/

Rolling Terrace Elementary School
705 Bayfield Street • Tacoma Park, MD 20912
www.montgomeryschoolsmd.org/schools/rollinges/

Washington Grove Elementary School
8712 Oakmont Street • Gaithersburg, MD 20877
www.montgomeryschoolsmd.org/schools/washingtongrovees/
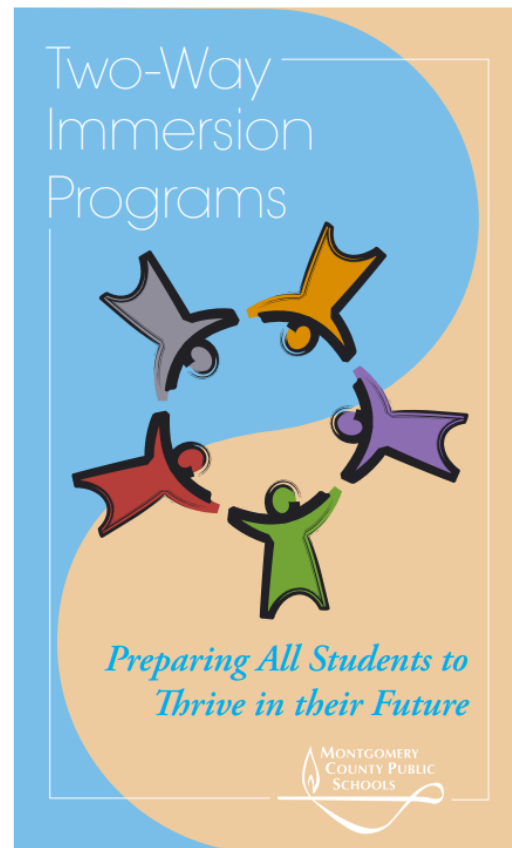
Being bilingual opens doors!

"If you talk to a man in a language he understands, that goes to his head. If you talk to him in his language, that goes to his heart."—Nelson Mandela

FOR MORE INFORMATION:
MCPS Two-Way Immersion
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Phone: (301)279-3671

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Two-Way Immersion Programs

Preparing All Students to Thrive in their Future

MONTGOMERY COUNTY PUBLIC SCHOOLS

Definition and Overview

Two-Way Immersion is an educational model in which students develop high levels of speaking, reading, writing, and listening in English and in Spanish (or another non-English language). Teachers deliver the same academic content and standards (MCPS Curriculum) as traditional classroom teachers, while providing instruction in two languages.

Ideally Two-Way Immersion classes are comprised of a fairly equal balance of native English-speaking students and native Spanish-speaking students. Native speakers of each language serve as fluent peer models of the language.

The students will typically receive lessons from two teachers; one providing academic instruction in English, and the other providing academic instruction in Spanish. Teachers are native or near-native speakers of the target language.

> *"Bilingualism is an experience that shapes our brain for a lifetime."*—Gigi Luk

Goals of the Program

The goals of the program include:

▲ To develop bilingualism and biliteracy in English and in Spanish

▲ To develop academic success in English and Spanish

▲ To develop positive cross-cultural attitudes and behaviors

In a Two-Way Immersion Program:

▲ Students receive 50% of their content instruction in English and 50% in Spanish to ensure that both languages have equal status

▲ Students develop fluency in a second language while continuing to build literacy in their home language

▲ Students develop greater understanding, tolerance, appreciation, and respect for other languages and culture

Long-Term Benefits

Benefits to students who participate in Two-Way Immersion programs include:

▲ Students realize more economic opportunities as fluent bilinguals

▲ Students will have an advantage in their college and career readiness, and will be better able to compete in the increasing global economy

▲ Language minority students perform better academically when they receive instruction in their native language

▲ Language majority students (English speakers) achieve grade level or above grade-level success while receiving instruction in a second language and while becoming proficient in a second language

▲ Students in Two-Way Immersion programs perform as well or better on standardized English achievement tests compared to their peers in English-only programs.

▲ Students who are fluent in two or more languages tend to demonstrate better impulse control, increased attention span, and better mental agility
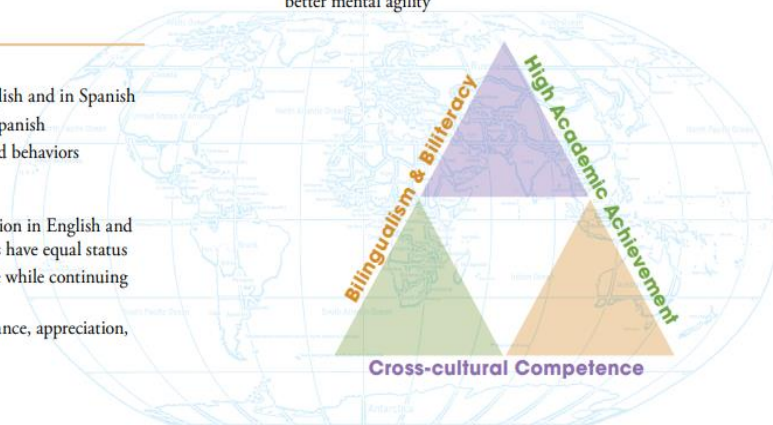
Appendix B

Characteristics of students in TWI program across the five schools, including Grade 2 in one school.

Table B1
Characteristics of students in TWI Program

	N	ESOL %	Special Education %	Non-FARMS All Other Student Groups	Non-FARMS Black or African American	Non-FARMS Hispanic/ Latino	FARMS All Other Student Groups	FARMS Black or African American	FARMS Hispanic/ Latino
Total Sample	829	52.2	8.8	15.9	4.2	10.3	3.9	11.8	53.9

Note. Based on Official Enrollment File 9_28_2018

Table B2
ESOL Levels of Students Receiving ESOL Services

	N	ESOL Level 1 %	ESOL Level 2 %	ESOL Level 3 %	ESOL Level %	ESOL Level 5 %
Total Sample	433	33.9	18.2	18.7	16.2	12.9

Table B3
Language Spoken at Home Among Students in TWI Program

	N	English %	Spanish %	French %	Amharic %	Other[a] %
Language at Home	829	62.4	33.8	1.0	1.1	1.7

[a]Other includes 11 other languages

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