

Additional Language Teaching and Learning in International Baccalaureate Primary Years Program Schools

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1. Introduction

Additional languages (AL) are offered in all IB programmes and whilst policy documents suggest that AL should be offered from the age of 7 – 17 based on the acknowledgment that the IB considers language as the vehicle of instruction, rather than a subject, where all teachers are teachers of language. In 2013 additional language teaching and learning occurred in 3,647 IB schools in over 145 countries, including 1050 PYP settings (www.ibo.org, 2013). To date there has been research conducted about additional languages in the Diploma Program (Pennington, 2012; Rydenvald, 2012), issues related to specific languages of instruction (Kilpatrick, 2010; van der Hijden, 2013), language learning as part of international mindedness (Allan, 2011), teacher experience in additional languages (Davis & Fisk, 2006; Huculak, 2011), second language learners in IB programs (Carder, 2011), and language teaching strategies for second language learners (Thomson, 2012), but little research has been conducted that focuses on additional language teaching and learning in a diverse range of PYP settings and languages. Undertaken by a consortium of university professors from four continents through a mixed method case study approach across six schools in six nations provided an opportunity, the aims of this study were: 1) to capture how schools, teachers, PYP coordinators and parents made meaning of ‘additional languages’ in IBPYP schools and explore additional language practices across diverse school structures and contexts in school language policies, cultural influences, teacher beliefs and practices, teacher training, classroom materials, student assessments, student learning outcomes, and the alignment of instruction with PYP principles and practices. The researchers sought to answer the following research questions:

1. What are the national or local factors influencing a school’s implementation of the PYP in relation to additional language teaching and learning?
2. How do additional language teachers’ perceptions of the PYP bring about changes in their beliefs and paradigm shifts in their daily practice (including knowledge and skills) as a result of teaching within the PYP?
3. As a vehicle for learning in the PYP, how do additional language teachers use structured inquiry to help students build meaning and refine understanding?
4. To what extent do those changes and paradigm shifts of additional language teachers influence the effectiveness of additional language learning and the cultivation of international mindedness as intended learning outcomes for students?
5. How is the PYP Language Scope and Sequence used? To what extent is it helpful to the teaching of the school’s additional language and in assessing and reporting on student progress? Are there elements (phases, stages, and learning outcomes) that could be developed further and improved?

1.1 Significance and Contribution of Research

The research findings will provide insight into the effectiveness of additional language teaching and learning in PYP schools, demonstrate how PYP language policy documents might be used to support planning for the additional language curriculum, and inform the development of policy documents and materials to, provide additional support and guidance to IB teachers.

This research adds empirical findings to a range of research fields involved in additional language teaching and learning, including the importance of contexts and socio-cultural factors regarding AL learning, the translation of IBPYP additional language learning policy into practice, inquiry based additional language learning and teaching, and international mindedness in AL classrooms.

The study responds to recent concerns that although the IB considers all subjects equal and promotes all teachers as teachers of language regardless of language type, script, or dialect, a sense of difference between languages and subjects still prevails in literature and in practice.

The research also contributes to a range of fields associated specifically with the emerging corpus of research on international schools that Lauder (2007, p.442) suggests is “still in its infancy”. The conflicting tensions, connections, and disconnections associated with the contested and ambiguous construct of ‘additional languages’ in this context has led to looking beyond a search for a definitive description and into critiquing its complexity.

Finally, the study will add to the wider corpus of literature surrounding the interconnectivity and complexities of language learning within curriculum policy processes that guided this study and in doing so makes this work of broader relevance beyond the IB sector.

1.2 Outline of the Sections

The research has been structured into five sections beginning with the Introduction that contextualizes the study, introduces the aim and research questions and identifies the contribution it makes to the field. Section 2 presents an in-depth review of relevant concepts drawn from the literature that surrounds the research aim and research questions. It explores the range of influences that impact AL learning and teaching such as socio-cultural factors like those outlined by Durlak and Dupre (2008) that include community, provider (school) characteristics, adaptability and compatibility of the curriculum, and program delivery systems. These systems consist of issues such as school culture, collegiality, collaboration, infrastructure, and teacher training. In addition, it explores literature surrounding implementation of integrated curriculum and inquiry in additional language teaching (van der Hijden, 2013). Section 3 presents the theoretical underpinnings that frame the qualitative research design and methodology. It articulates the data collection and analysis processes and the timetable of events. Section 4 presents the findings from the data. It includes data collection and analysis and the findings are framed by the core themes:

- a. Language Policy and Shaping forces – additional language teaching practices, factors that influence additional language teachers (ALT), AL program and responses to the influences, school support, and professional development in tackling the challenges.
- b. Additional Language & Inquiry – inquiry challenges and solutions.
- c. Language Scope and Sequence – challenges and solutions, including relevance of

- the documents.
- d. Impact of PYP and AL program on teachers and students.

Section 5 provides a conclusion, a summary of the study, and a range of recommendations in response to the research questions.

2. Literature Review

The essence of the IB PYP is structured inquiry in big (central) ideas that transcend disciplinary boundaries and are essential to student life. Students are expected to acquire disciplinary knowledge and skills through inquiring into various authentic transdisciplinary issues and problems. To understand how additional language teaching and learning fare in this concept-based, inquiry-focused, transdisciplinary curriculum in different sociocultural contexts, we looked for 1) insights in the literature on sociocultural factors that affect the implementation of educational initiatives and 2) the implementation of additional language strategies related to integrated curriculum and inquiry. The literature review below shed light on the sociocultural factors that might affect the implementation of PYP in additional language teaching and learning and the challenge and essential issues related to the implementation of integrated curriculum and inquiry in the teaching of additional languages. The insights from the literature review on these two aspects informed the development of the interview questions with the participants, the school documents and classroom observations that influence the additional language teaching and learning in the PYP program, and our interpretation of the research findings.

2.1 Sociocultural Factors that Affect the Implementation of PYP in Additional Language Teaching and Learning

The concept of additional languages in the IB is not universal. In the IB it refers to the other languages in a school in addition to the language of instruction. Furthermore, the language of instruction and/or the additional language may be different from the students' mother tongue.

Schools are subject to the influence of various sociocultural factors since “schools do not implement the IBPYP in a vacuum and there is a great deal of interference acting within and outside the school” (Kauffman, 2005, p. 259). To understand which sociocultural factors may exert influence on the implementation of inquiry-based transdisciplinary curriculum, we need to first of all understand what and how various sociocultural factors affect the implementation of additional language programs in general.

Literature on educational intervention implementation suggests three main categories of variables that interact with each other to affect the implementation of educational innovation: the characteristics of the innovation (i.e., the need for, the clarity of, the complexity of and the practicality of the innovation); the local characteristics (i.e., community, school leadership and individual teacher characteristics, and collegial factors); and the external factors (i.e., the context of the broader society) (Fullan, 2007). Durlak and Dupre (2008) expanded the model further and proposed an Ecological Framework for Understanding Effective Implementation to capture the multitude of interacting ecological factors of the program at individual and community levels that

affect teachers' decision making. This framework proposed interacting variables from five categories: (1) community level factors; (2) provider characteristics such as perceived need for and value of the program and perceived ability and skill in implementing the program at a high level of fidelity; (3) perceived adaptability and compatibility of the program; (4) program delivery system in terms of organizational capacity such as work climate, shared vision and decision-making, communication mechanisms, staff recruitment and placement; and (5) the program support system such as training and support mechanisms. Durlak and Dupre's model (2008) will serve as the theoretical framework for the literature review on the sociocultural factors that affect the implementation of PYP in additional language teaching and learning.

Community level factors

Community level factors refer to the politics, funding and policy issues related to the educational intervention. The regional laws and policy would dictate the choice of additional language at the school level. Language is often a mark of social class and identity, with some languages being seen as far more useful and valuable internationally than others (Reagan, 2005). The value is affected by cultural and linguistic distance. Cultural distance can be determined by the size of the population of native speakers; the importance of the economies where the language is spoken; the geographical, political, and historical proximity to the target language country; and the extent the local community has a large immigrant population (Zhao, 2012). Linguistic distance refers to the similarities and differences between the languages in the learning process. The language offerings at a school are most often grounded in historical sociopolitical power relationships. In addition, the selection of the language to be studied by the student is constrained by his or her social and educational background and expected life outcomes (Reagan, 2005).

At the same time, availability of funding and resources also affect school policy and practice. The innovative additional language classroom needs a range of materials and experiences to maximize the language learning. Materials such as realia, experiential activities, easy to read books, and language development technology are excellent sources of stimulation for an additional language classroom and need to be prioritized in schools with limited resources. Local field trips and guests who are native speakers of the target language can be a source of learning with minimal costs.

Provider characteristics

Provider characteristics refer to the perceived need for innovation (i.e., the extent to which the proposed innovation is relevant to local needs), perceived benefits of the innovation (i.e., the extent to which the innovation will achieve benefits desired at the local level), self-efficacy (i.e., the extent to which the providers feel they will be able to do what is expected), and skill proficiency (i.e., whether the provider perceived the skills necessary for implementation).

Perceived need for innovation. Perceived need for innovation is influenced by teachers' beliefs about the program, characteristics of the language, learners and their coherent beliefs, and assumptions and knowledge about teaching and learning (Nishino, 2012).

Teachers' beliefs about the program and about teaching and learning are subject to the influence of cultural beliefs and norms. Cultural dissonance, in terms of social norms and educational philosophies, is found to pose potential challenges to the integration of core IB values into teaching (Drake, 2004; Lee et al., 2011). Hofstede (2008) has conceptualized there might be differences in teaching and learning across cultures and the differences may manifest in four dimensions: different power distances may lead to different conceptualizations of the roles of teachers and students in teaching and learning; different levels of uncertainty avoidance may influence student learning styles and expected communication between teacher and parents; individualism/collectivism may shape different conceptualizations about the purpose of education and desirable student behavior in class; and masculinity/femininity may affect students' expectations of student-student relationships and their perceptions of collaboration. Gu (2010) compared Chinese and British English language teachers and found that there was no marked difference in their views on the nature of language and the desire for more interaction in language teaching and learning. However, the teachers differ in terms of the value they place on grammar and their views towards the content of the knowledge and the delivery: Chinese teachers valued grammar more and felt that "it is the content of the knowledge, rather than its delivery, that should be at the heart of teaching" (Gu, 2010, p. 37). Thus the influence of the traditional Chinese value of respect for knowledge constrains the degree to which they are prepared to change their practice towards communicative language teaching approaches. Gu (2010) advocates for a culturally relative perspective/approach to innovation and emphasizes the importance of taking into account culturally bound values and conventions when implementing educational innovations. In addition, broader educational conditions such as examination pressure and educational policy also impact teachers' beliefs and practices.

Teachers' belief about teaching and learning shape their receptivity to an educational program and the fidelity of their implementation of the program. For instance, Jeon (2006) found that Korean teachers prefer to use tasks as a motivator rather than an 'engine' for language learning. Furthermore, teachers' perceptions of their roles in language teaching also shape their responses to educational programs. For instance, when implementing task-based language teaching, most Asian teachers perceive their jobs as essentially delivering knowledge to students (Xu et al., 2008), and have been found to struggle with a shifting of teaching style and were reluctant to give up control in the classroom (Adams & Newton, 2010; Littlewood, 2007).

Perceived benefits of innovation. Perceived benefits of the innovation also affect the receptivity and implementation of the educational innovation. Researchers have found that strong leadership from both the principals and the IB program coordinators in terms of their belief in and support of IB philosophy and their active promotion of IB programs to the public has been found to be crucial (Gilliam, 1997; Hall et al., 2009; Hallinger et al., 2010; Riesbeck, 2008). Focusing in particular on fostering international mindedness, Hayden and Thompson (1996) found that the exemplary role of teachers and the management team's buy-in of IB philosophy are critical.

Furthermore, student characteristics and buy-in of the educational innovation also affects its implementation. Language learning beliefs, comfort level with autonomy and freedom in student-centered approaches, and diversity among the learners also impact whether and how an educational innovation gets implemented. For instance, in Asia, learners were found to hold strong beliefs in the role of grammar in language learning, and thus desire systematic, explicit grammar instruction and expect such instruction to precede language practice and performance (Lai, Zhao & Wang, 2011; Lowen, et al., 2009). Asian students were found to fail to take initiatives and not be willing to take risks in language processing and production (Burrows, 2008). This lack of initiatives is also manifested in students not exploiting their full language resources during task performance, but only investing the minimal amount necessary to get the task done (Carless, 2004; Lee, 2005). Students have consequently been found to suffer from anxiety over the freedom they are given in some student-centered language teaching approaches (Burrows, 2008; Lopes, 2004). These factors may cause challenges to the implementation of student-centered approaches in some regions in the world. Furthermore, the diversity among learners may cause challenges to educational innovations that involve group work. It is hard to engage all the students, and usually students with higher language proficiency may benefit the most while students with lower language proficiency and with shy personalities may get frustrated at the ‘taxing’ approach to learn, possibly withdrawing from participation (Burrows, 2008; Tseng, 2006). The commonality of mixed proficiency classes in Asian contexts challenges the successful implementation of some student-centered approaches (Butler, 2005; Chao & Wu, 2008).

Self efficacy and skill proficiency. The implementation of innovation is influenced by the teachers’ prior experience, their knowledge and perceived value of the innovation, and their self-efficacy in achieving the goals innovation’s goals (Pinto, 2005; Powell & Anderson, 2002). The IB curriculum relies heavily on teachers’ creative professionalism, and thus teachers’ understanding of IB philosophy and their grasp of relevant implementation skills are also critical (Gilliam, 1997, McGhee, 2003). In addition, the non-specificity of the philosophical and epistemological principles of IB programs has also caused implementation obstacles for teachers (Gigliotti-Labay, 2010; Halicioglu, 2008). The philosophical underpinnings of the IB programmes, such as international mindedness, are abstract and elusive philosophical concepts (Halicioglu, 2008), the understanding of which is subject to the influence of professional experiences, personal dispositions, and local contexts (Rodway, 2009).

Perceived adaptability and compatibility of the curriculum

The extent to which the educational program fits with an organization’s mission, priorities, and values and the extent to which the program can be modified to fit provider preference, organizational practices and community needs, values and cultural norms all influence the final implementation of a curriculum.

When a program is perceived to be in conflict with local needs and expectations, the fidelity of the program implementation will be risked. For instance, Hallinger, Walker and Lee (2010) pointed out that IB schools in Asia are under greater pressure to have external exams and subject contents as the core of teaching than IB schools in other

regions. In some Asian countries and increasingly around the world, the pressure to achieve immediate learning outcomes and good test results often puts teachers under too much stress to experiment with pedagogical practices which are long-term and holistically oriented. Deng and Carless' (2009) study on four English as foreign language teachers from two primary schools in mainland China presents a telling case. One school is a state-run public school that was heavily examination-oriented and even mandated the amount of time to be allocated for examination preparation in the English classes. The other school was a private school with diverse curricula and less examination pressure. The researchers found that the teachers from the private school were more experimental and demonstrated more communicative-teaching orientation than the teachers from the public school. Another example is in the context of Latin America where schools are trying to build in aspects of the local indigenous culture while adopting a more child centered collaborative model. However, some teachers perceive difficulties with a child centered collaborative model: Children are harder to control, they only understand through shouting, the change of methodology requires a lot of time, and working with the indigenous language is not enjoyed by the children (Inostroza, 2005, p. 67).

Program delivery system

Program delivery system refers to the organizational capacity such as work climate, shared vision and decision-making, strategic planning and effective human resource management, communication mechanisms, and staff recruitment and placement. These are critical factors that influence the implementation of educational programs.

School culture. Cultural context in a school is defined as “any group of people who have a shared way of seeing and making sense of the world” (Livermore, 2010, p. 13). To develop a positive school culture, leaders must build trust and good communication with the students, parents, and community (Chance, 2009). Developing cultural proficiency in the leadership also enhances the school culture in a multicultural setting (Van Vooren & Lindsey, 2012). A strong leadership team is critical to shaping and supporting individual teachers' endeavors to integrate IB philosophy into their teaching (Hall et al., 2009; Riesbeck, 2008). The trust level and value alignment of school leadership and teachers, the parents' and students' understanding, and the expectations of the programme all influence the implementation of the IB curriculum (Culross & Tarver, 2011; Hartman, 2008; Gigliotti-Labay, 2010).

Collegiality and collaboration. An important practice for leaders to support and sustain the additional language program is the development of collegial, professional, learning communities. The theoretical underpinnings of professional learning communities (PLC) are based on the work of DuFour and DuFour, which places the school leadership at the forefront of successful school programs and improvement (Gillespie, 2010). A professional learning community is characterized by an environment that fosters mutual cooperation, emotional support, personal growth, and a synergy of efforts (Dufour & Eaker, 1998). According to Fullan and Stiegelbauer, “*school improvement is most surely and thoroughly achieved when teachers engage in frequent, continuous and increasingly concrete and precise talk about teaching practice . . . adequate to the complexities of*

teaching, capable of distinguishing one practice and its virtue from another." (1991, p. 78)

Judith Warren Little (1990) describes truly productive teams as those in which teachers rigorously "plan, design, research, evaluate, and prepare teaching materials together" (p. 526-527). Peer coaching and consulting have been found to be the most effective vehicles to prompt changes in teachers' classroom practices (Fixsen et al., 2005). Teacher collaborating with each other leads to greater solutions to instructional problems, and increased confidence and skills among teachers (Little, 1990). Teachers collaborating with students in the development of units maximizes authenticity, interest, student responsibility, ownership and significant learning (Inostroza, 2005).

School infrastructure. Resources, instructional time, class size, administration support, and instructional freedom have been found to influence the implementation of educational programs (Pinto, 2005; Songer, Lee & Kam, 2002).

Program support system

Program support system refers to the training needed to ensure provider proficiencies in the skills necessary to conduct the program and to enhance their sense of self efficacy. In addition, it points to the support mechanisms available in offering retraining of skills and emotional support.

Teacher training. Glickman (2002) believes that teachers cannot improve their craft in isolation from others. To improve, teachers must have formats, structures, and plans for reflecting on, changing, and assessing their practice. Darling-Hammond (1997) further supports the notion that the core structure essential to reaching student learning goals is built around "*teaching teams, time for teachers to collaborate and learn together... ongoing inquiry as a basis for continual improvement*" (p.297). Principals who develop time for the additional language teacher to collaboratively plan and reflect on student learning with the classroom teachers will benefit from the instructional quality and student outcomes. Language embedded content and critical vocabulary can be central to all lessons if teachers collaborate and plan systematically to further student connections. The most productive combinations of thought and action occur in team-based, short-term experimental cycles (Fullan, 2001). Successful schools develop policy and practice to support the time needed for teacher professional interaction.

In a small research study of primary school language support teachers in Ireland, Murtagh (2012) identified key themes that included the need for focused pre-service training, continuing professional development for all teachers involved in teaching students in English as an Additional Language (EAL), and the provision of appropriate resources for teaching and assessment of these students.

2.2 Implementation of Integrated Curriculum and Inquiry in Additional Language Teaching

In addition to the list of factors that affect the implementation of educational initiatives in general, current literature has also identified a list of challenges or issues specific to the implementation of integrated curriculum and inquiry.

Integrated inquiry-based curriculum that transcends across disciplinary boundaries is not a new educational invention. It has been around since the 1930s when Dewey raised the concept of progressive education. Curriculum integration takes various forms along a continuum with one end being parallel or correlated instruction: recognizing disciplines as clearly identifiable entities with specific knowledge and skills associated with them and teaching related content in different subject areas during the same periods. The other end being transdisciplinary instruction: fusing disciplines and learning happens through teacher guiding students to works on issues, problems or projects that are of concern to them (Drake & Burns, 2004). The transdisciplinary curriculum that IB PYP program follows belong to the far end of curriculum integration, which brings with it a set of challenges in implementation.

Challenges of teaching additional language via integrated curriculum and inquiry

Beane (1996) in his seminar work on curriculum integration envisioned several challenges that teachers are going to encounter when implementing inquiry-based, transdisciplinary curriculum. The challenges he envisioned include resource availability, existent school infrastructure, teacher perception, and student variation. The problem with resource availability lies in the fact that existent resources like textbooks are almost always organized around separate subject and skill areas. School infrastructure, such as teaching period set-up and student report cards, usually operates around separate subject and skill areas. Teachers are under the influence of previous educational experience and the deeply-held belief that “coverage equals learning”. Finally, students vary in terms of their willingness to communicate and accept the ambiguity. All these factors might challenge the implementation of inquiry-based transdisciplinary curriculum.

Challenges of resource availability and school infrastructure level. Lack of resources for planning integrated units has been listed as a concern for implementing integrated curriculum (Wallace, 2012). Twigg (2010) found that some PYP teachers are reluctant to implement inquiry-based teaching methods due to the lack of equipment and materials. The lack of resources is closely related to a challenge at the school infrastructure level: difficulty with planning. Implementing a transdisciplinary curriculum demands extensive collaborative planning among teachers. Flowers, Mertens, and Mulhall (2003) reported that teachers need to do at least four 30-minute co-planning sessions each week in order to achieve consistent positive outcomes. However, teachers reported that the intensity and frequency of collaborative planning with single subject teachers is hard to meet due to schedule conflict (Ozer, 2010). This problem is echoed by teachers in Bintz et al.’s (2006) study, “*Our schedule reflects a discipline rather than an interdisciplinary model of scheduling and that hinders the ability of teachers involved in [integrated] projects like this from having the same students*” (p. 37). An associated challenge lies in the time demands for planning. Teachers in Weilbacher’s (2000) study reported the required time

commitments and the difficulty with time management as the major reason for discontinuing curriculum integration.

Challenges at the teacher and student level. The success of an inquiry-based transdisciplinary approach demands some essential qualities of the teachers and the students: respect, trust, open-mindedness, flexibility, cultural awareness, and the confidence to take risks (Twigg, 2010). The presence or non-presence of these qualities leads to the variations in teacher practices in PYP programs. For instance, students in the Asian countries have been found to have problems with knowledge building through inquiry: They are found reluctant to share unsure ideas that still need refinement, are reluctant to challenge the authority of the teacher, and expect teachers to tell them what to do (Truong, 2008). Furthermore, teachers who are found reluctant to implement inquiry-based teaching methods reported lack of exposure to inquiry-based teaching methods during their teacher training years and concern that inquiry-based learning does not work for some students (Twigg, 2010).

Challenges from the nature of subject areas. Ozer (2010) examined a group of kindergarten teachers' experience in implementing IB PYP program in Turkey. These teachers reported certain subject areas are harder to integrate and these subject areas include mathematics and additional languages. To them, mathematics is challenging to integrate due to the fact that the sub-learning outcomes in math do not fit in very well with the integrated units. For additional language, the difficulty lies in the fact that students' proficiency in a second language may pose a difficulty in understanding some topics.

In addition, there is constant concern that integrated curriculum might threaten the integrity of disciplines and lead to less rigorous study of the subject matters (Gardner & Boix-Mansilla, 1994). Such discursive influence makes teachers torn between balancing meaningful, applied learning situation in integrated contexts and the focus on traditional, conceptual learning of subject-based knowledge (Venville *et al.*, 2009). Furthermore, Halbach (2009) highlights the challenge of the double cognitive effort it takes to learn new concepts in a second language when still developing cognitive abilities in their first language.

Essential issues in teaching additional language via integrated curriculum and inquiry

Despite the challenges of running integrated curriculum and inquiry, current literature also identified a list of issues essential to additional language teaching and learning via integrated curriculum and inquiry. These issues include the utilization of students' native language(s) during inquiry, cooperative student learning groups, language assessment for progress, developing questions, direct teaching, and conceptual understanding.

Students' native language(s). The use of the student's primary language is a crucial issue in inquiry-based additional language teaching. If literacy is a tool for inquiry as stated in the PYP, to conduct purposeful inquiry students need mastery in a large range of skills. If students can inquire in their first language, where a greater level of mastery has been attained, surely the inquiry will be more purposeful. Dare (2009) notes that many are

tempted to ban students from using their first language (L1) at school. “*This is counter-productive because our language is our major meaning-making system and, at least initially, students will be drawing heavily on their home language and attempting to translate these meanings to and from English*” (p.75). Halbach (2009) supports allowing students to use their L1 particularly in reading, with literacy considered as a key to knowledge and a tool for learning. According to Manyak (2008, p. 52) encouraging bilingual students to translate each other’s works helps them to negotiate with words and push children to seek out new vocabulary. Ball (2010) supports children retaining their mother tongue while acquiring additional languages and notes the importance of continued interaction with their community in their first language on increasingly complex topics. Schools can play a key role in providing opportunities for the communities to interact.

Cooperative learning. Cooperative learning is a critical component to inquiry-based approaches. Johnson, Johnson, and Maruyama (1983) found “cooperative learning experiences promoted more positive relationships among individuals from different ethnic backgrounds” (p.213). Tokuhama-Espinosa (2008) mentions peer-teaching as a spinoff of the social-cultural concept. She further notes that informal peer instruction is one of the most powerful ways of getting young learners to use language in appropriate ways. Hattie (2009) also notes that students are more able to collectively make and learn from errors as well as clarify goals, learning intentions and success criteria from conversational interchanges.

However, cooperative learning may be simply about organizing students into groups. Rather, several pedagogical considerations in cooperative learning are critical to its effectiveness. First, teachers need to decide responsible social group roles according to what language will be needed to carry each out. It is not the same to be a timekeeper in a group or the secretary to take notes and inform the rest of the class. “Social learning processes, stimulated by inquiry within particular contexts, can foster a greater capacity for responding to learner diversity. Collaboration and the use of evidence as a means of stimulating experimentation are seen as key strategies for moving such processes in a more inclusive direction” (Miles & Ainscow, 2009). Second, structure is crucial. Hattie (2009) notes that peer learning is powerful regardless of it being cooperative or competitive. This is even more powerful when there is some structure to that learning. Hattie cites Howard (1996) who claims formal directions to implement a cooperative learning session were particularly effective when new material was organized and elaborated on (deep versus surface processing). Third, expert scaffolding (repeated modeling) is necessary for converting the spectator into the performer. It was also noted that explicit teaching before the dialogue increased effect. Routman (1991) notes the importance of a relaxed social situation to invite additional language learners to read along with an expert model while receiving support from the expert who accepts and encourages efforts and approximations.

Assessment. An implicit challenge faced in the additional language classroom is the knowledge of the current level of understanding of concepts being approached in a language that is not the student’s mother tongue in order to bring them to next levels. The

assessments in language learning, therefore, need to adapt to multiple ways of showing what students know. Halbach (2009) notes that additional language students can't always express all that they understand and suggests using assessment tools that do not require a lot of language (multiple choice, short answer, labeling, matching) and to rethink the importance of accuracy. Varlas (2012) mentions a school's 'root of the week' initiative focusing content teachers on Latin roots (morphemes or word parts) that translate as labels for concepts across the disciplines.

Questioning. The use of questioning is an essential component of inquiry. When implementing the use of questions one should keep in mind their use, especially those questions that effectively discourage rather than encourage learning (Elstgeest, et al, 1985). The authors identify 'wrong' questions as those which have responses that can be found in a textbook and note that these, in particular, cause anxiety in students if they can't come up with the 'right' answer. Wordiness can also get in the way. Teacher explanations may be too difficult if the students' depth and ability is not properly gauged. It is also necessary to have the right equipment to support the explanations. Students' not knowing allows the teacher to support the functional literacy of the students by guiding them to the appropriate resources for their own investigation. The authors note that students using 'because' for answers should be more valuable to teachers as they demonstrate their own reasoning. Dare (2009) proposes using the strategy of pre-formulation when reading a difficult text with the students. That is, providing students with enough prior knowledge before asking the questions so that they will certainly be able to answer the questions that follow. "By building up enough shared understandings, you ensure that students can respond more successfully to teacher questions" (Dare, 2009, p.82). Cummins (2012) recognizes that one of the skills of successful English language learner (ELL) teachers is ensuring students understand by providing wait-time, a period to allow the students to think before replying. This can be particularly important when responding to questions where additional language learners need to formulate the answers in their minds before producing it.

Direct teaching. Although inquiry-based learning centers on student-initiated questions and explorations, direct teaching still has its place in this approach. Hattie notes that the most direct and active methods of teaching appear to be optimal for achieving the construction of conceptual knowledge (Hattie, 2009). He outlines seven steps involved in direct teaching including: clarity of learning intentions, defined success criteria, building commitment and engagement for the learning task, guides to how the teacher presents the lesson, guided practice, lesson closure and independent practice. Although the teacher is 'directly' in control, student motivation and initiative are still part of the formula. Direct teaching does not imply that inquiry cannot be used, rather, it ensures that there is clarity and scaffolding with instructional purpose.

Conceptual understanding in an additional language. To resolve the double cognitive effort involved in learning new concepts in a second language, Halbach (2009) emphasizes the need for teacher support by using visuals, mime, realia and student experience as a starting point. Learning content is then in relation to personal experiences

with visuals, gestures and realia, not abstract issues. Unfortunately, content can only lay the foundation for conceptual understanding which is an ‘abstract issue’.

Content-based teaching allows children to use language for real learning-oriented purposes, citing Wildhage and Otten (2003), in the need to teach language as a vehicle for communication rather than an end in itself allowing for a higher level of processing and expediting language learning to make it memorable (Halbach, 2009). To address Hattie’s ‘active methods of teaching’, Miles & Ainscow (2011) suggest as a starting point for teachers to think about having language accompanying action rather than language itself being the focus. This shifts the learning of English to learning in English. If there is a context base for learning vocabulary, the memory capacity is improved (Larrison, 2013).

2.3 Summary

Thus, current literature identifies a list of factors that could potentially affect schools and teachers’ implementation of structured inquiry through transdisciplinary curriculum in additional language teaching. It also highlights some issues additional language teachers might face in 1) integrating additional language teaching in transdisciplinary curriculum and 2) implementing structured inquiry in an additional language. These factors and issues inform our investigation into how structured inquiry is implemented in additional language teaching and learning in response to the sociocultural realities in different regions around the world.

3. Research Methodology

3.1 Research Design

The qualitative case study research took place in multiple sites across six countries. The study focused on the lived experiences of local level policy actors and how they made meaning of IB PYP Additional Languages (AL). In this instance the policy actors included the principal, PYP coordinator, AL teachers (ALT) and parent representatives. A student survey to investigate student perspectives of AL in PYP schools was developed as one of the outcomes of the study.

The following research questions that guide this project reveal the scope of the research. (Table 1 illustrates connections between the research questions and data collection and analysis methods):

- 1) What are the national or local factors influencing a school’s implementation of the PYP in relation to additional language teaching and learning?
- 2) How do these contextual factors impact the development of the school’s documented language policy?
- 3) More specifically, how is the teaching and learning of the school’s additional language integrated throughout the curriculum and particularly within the programme of inquiry?
- 4) How are teachers introduced to the pedagogical approaches of inquiry and other educational philosophies embedded in the PYP curriculum framework?
- 5) What perceptions do teachers have of these approaches and philosophies and what

- kind of IB professional development opportunities have additional language teachers experienced?
- 6) How do additional language teachers' perceptions of the PYP bring about changes in their beliefs and paradigm shifts in their daily practice (including knowledge and skills) as a result of teaching within the PYP?
 - 7) As a vehicle for learning in the PYP, how do additional language teachers use structured inquiry to help students build meaning and refine understanding?
 - 8) To what extent do those changes and paradigm shifts of additional language teachers influence the effectiveness of additional language learning and the cultivation of international mindedness as intended learning outcomes for students?
 - 9) How is the PYP Language Scope and Sequence used?
 - 10) To what extent is it helpful to the teaching of the school's additional language and in assessing and reporting on student progress?
 - 11) How is the PYP Language Scope and Sequence used?

Table 1. Research Questions, Methods, and Analysis

Research Questions	Method	Analysis
A. External Influences and AL Integration		
1. What are the national or local factors influencing a school’s implementation of the PYP in relation to additional language teaching and learning? 2. How do these contextual factors impact the development of the school’s documented language policy? 3. How is the teaching and learning of the school’s additional language integrated throughout the curriculum and particularly within the programme of inquiry?	a. Document collection through local/national news, public laws, school websites, IB website, administrator provision, and interviews b. Interviews with school leaders, documents c. Review programme of inquiry, planners and interviews	a. Hand scoring of themes in the document collection. b. Interview analysis for themes using platforms at the discretion of each researcher.
B. Teacher Training, Perceptions, and Paradigm Shifts		
1. How are teachers introduced to the pedagogical approaches of inquiry and other educational philosophies embedded in the PYP curriculum framework? 2. What perceptions do teachers have of these approaches and philosophies? 3. What kind of IB professional development opportunities have additional language teachers experienced? 4. How do additional language teachers’ perceptions of the PYP bring about changes in their beliefs and paradigm shifts in their daily practice (including knowledge and skills) as a result of teaching within the PYP?	a. Interviews and document collection including the use of the school mission, PYP Language Policy and Practice, professional training charts b. Interviews with additional language teachers and school leaders c. Interviews with additional language teachers and document collection d. Interviews with additional language teachers	a. Hand scoring of themes in the document collection. b. Interview analysis for themes using platforms at the discretion of each researcher.
C. Pedagogy of Structured Inquiry		
1. How do additional language teachers use structured inquiry to help students build meaning and refine understanding	a. Interviews with additional language teachers	a. Interview analysis for themes using platforms

		at the discretion of each researcher.
D. Cultivation of International Mindedness		
1. To what extent do those changes and paradigm shifts of additional language teachers influence the effectiveness of additional language learning and the cultivation of international mindedness as intended learning outcomes for students?	a. Interviews with school leaders, additional language teachers, and classroom teachers.	a. Interview analysis for themes using platforms at the discretion of each researcher.
E. Use of IB Documents for Guidance and Recommended Improvements		
1. How is the PYP <i>Language Scope and Sequence</i> used?	a, b, and c. Interviews with school leaders, and additional language teachers.	a. Interview analysis for themes using platforms at the discretion of each researcher.
2. To what extent is it helpful to the teaching of the school's additional language and in assessing and reporting on student progress?		
3. Are there elements (phases, stages, and learning outcomes) that could be developed further and improved?		

3.2 Research Phases

This study involves intensive case studies at six PYP schools around the world. The project was divided methodologically into four phases which are listed below and explained further in depth.

Phase 1 - Initiating themes through literature review and focus groups:

Case study interviews were developed based on themes that emerged from the original research questions, the focus group outcomes, and the literature review.

Phase 2 - Conducting data collection at case study schools:

Interviews with the school and school community were carried out. Document data such as website information, school policy documents, and unit of inquiry planners were collected and classroom observations and walkthroughs were conducted to triangulate the interview data and provide further insights into the phenomena.

Phase 3 - Qualitative analysis and writing the final report:

The coding of the data collected at each site and the cross case analysis highlights convergence and challenges related to the teaching and learning of additional languages in PYP schools.

Phase 4 - Additional language student survey:

This survey was created from the findings and recommendations of the final report and intended to seek information from students to add to this study. The language survey models will serve as a tool for the IB for further research.

3.3 Participants

The participants included school leaders (principals and PYP coordinators), additional language teachers, and parents from authorized IB PYP schools. The schools were selected from a purposeful sampling of six schools from the three IB regions of: Asia-Pacific (IBAP), the Americas (IBA), and Africa, Europe, and the Middle East (IBAEM). A total of six cases were conducted as full individual case studies comparable across and between regions. The schools were selected to maximize heterogeneity and provide diversity among the schools with choices of additional languages being English, Spanish, German, Japanese, and Chinese. English was used in all schools in some method of instruction, including as the primary language of instruction, as one of two dual languages, or as an additional language. The schools also represented students from different socioeconomic backgrounds, private and public schools, local and non-local structures, and with varying levels of experience with the PYP.

Principals. Interviews were conducted with principals to understand their school's mission, beliefs and values, school language policy, support mechanisms and indicators, budgetary forces, staffing issues, resourcing difficulties, professional development policy, effect of socio-cultural (host country) factors on the implementation and school practices, and other support systems for implementing additional language teaching and learning.

PYP coordinators. Interviews were conducted with PYP coordinators to understand the development of their school language policy, the use and development of PYP Language Scope and Sequence, the teacher understanding and challenges, and mechanisms to support structured inquiry in additional language teaching and learning.

Teachers. Interviews with school-selected additional language teachers were conducted to understand the challenges they encounter in integrating structured inquiry in additional language teaching, implementing content embedded planners, developing culturally relevant instructional practices, challenges related to student characteristics and parent beliefs, support needed for better integration, and how teaching within the PYP changed or failed to change their belief systems and classroom practice.

Parents. Interviews with school-selected parents were conducted to understand the contexts of home, characteristics of children, how parents support and challenge language programs, perspectives and beliefs that are aligned and misaligned, concerns, reasons for choosing the school, understanding of the PYP in general, and language learning in particular.

3.4 Data Collection

Data collection consisted of two components to richly describe the effectiveness of the additional language teaching and learning at the select schools. These were:

- 1) The *Case Study Interviews* with select school and community stakeholders were conducted face-to-face to verify the school’s cultural beliefs, educational issues, and pedagogical practices that were found in school documents submitted.
- 2) A *Document Collection* was sought with resources from the internet, the school leadership, and the additional language teachers to provide supporting evidence of additional language policies and practices such as the school organization, student profiles, additional language curriculum integration, unit planners, materials, assessment, learning outcomes and classroom observations.

The following table illustrates the areas of focus for data collection and analysis.

Table 2. Framework for the Case Study

I.	School background	
II.	Additional Language Policy and Teaching Practices and Shaping Forces	<ol style="list-style-type: none"> a. Additional Language Policy and Shaping Forces b. Additional Language Teaching Practices c. Factors that Influence Additional Language Teaching Practices d. Additional Language Program and Responses to the Influences e. School Support and Professional Development in Tackling the Challenges

III.	Additional Language and Inquiry	<p>a. Integrating Additional Language in Program of Inquiry: Challenges and Solutions (other subject matter, position of language in whole PYP, types of content not as deep, scheduling, collaboration)</p> <p>b. Inquiry Approach in Additional Language: Challenges and Solutions</p> <p>c. Inquiry Approach, Lang Proficiency, Scaffolding</p> <p>d. School Support and Professional Development in Tackling the Challenges</p>
IV.	Language Scope and Sequence Challenges and Solutions	
V.	Impact of PYP and Additional Language Program on Teachers and Students	

3.5 Data Analysis

The Researcher Consortium of University Professors investigating six IB schools in three IB regions analyzed each case study school's data using email, Blackboard, Google Docs, Skype, Zotero, Dropbox, and other online tools to share their data and discuss findings.

- a) The *Case Study Interviews* were transcribed, coded, and analyzed for themes using software programs determined by each researcher and their corresponding universities. These were shared to the entire team and reviewed for patterns.
- b) The *School Documents Collection* and the class observations/walkthroughs were hand sorted by the researchers assigned to each school to determine themes and additional information that complements or triangulates the interview data.

Discussions were then held among the research team to refine the codes and categories and form an initial coding scheme. A coding document with the initial coding scheme was further refined as research team continued to code the interview data in their respective case study. These six reports are the summary of the case study interviews at each school. The codes used to categorize the transcribed interviews generated the headings or outline to organize the case study reports. Individual case study reports for each site were then written up using the coding document. These in turn were used to write the final overall case study interview report. The cross case analysis highlights convergence and challenges related to the teaching and learning of Additional Languages in PYP schools. The case studies were organized by an agreed framework including the school background; additional language policy, teaching practices and shaping forces; additional language and inquiry; language scope and sequence challenges and solutions; and the impact of the PYP and the additional language program on teachers and students. Halbach's (2009) belief that teacher training is a major factor in moving towards new methodologies, changing mental frameworks, rethinking practice, acquiring tools,

knowledge, techniques and resources as well as improving the language proficiency of ELL teachers was used to inform the findings. Although the issues were separated for statistical purposes it is acknowledged that each issue will not be mutually exclusive, but impact other areas. For example, the language proficiency of students, PYP experience of the teacher or school funding are specific issues however they permeate all levels of implementation.

3.6 Limitations

This research was conducted looking at six case study schools and may not be generalizable to other schools. The researchers were involved with university recognized IB Teacher Certificate programs and may have had bias towards the comments and the perspectives of those interviewed.

4. Research Findings

The data for Chapter 4 was collected through interviews with additional language teachers, the PYP coordinator, the principal, and parents at each of the six case study schools. The individual case study reports are synthesized in Chapter 4.

4.1 Case Study School Backgrounds

Six International Baccalaureate (IB) Primary Year Programme (PYP) schools participated in this study with geographic locations representing each of the three IB Regions: Asia-Pacific; Africa, Europe and the Middle East; and the Americas (see Table 3). All of the schools are IB PYP authorized with a range from one to fifteen years of authorization. Each of the schools utilizes English in some way as a method of instruction, including as the primary language of instruction, as one of two dual languages, or as an additional language. Other languages taught as an additional language or used as the primary language of instruction in the case study schools include German, Cantonese, Spanish, and Japanese. Three of the schools are private and have a very international student body, including expatriates and foreign populations to that country. Two of the schools are public, with mostly local students and a population of mixed parent education and family income levels. One school is a non-profit that is registered as a charitable institution and boasts a large international population. All of the schools have a small population of students who speak neither English nor the school designated additional language as their mother tongue. Most of the language teachers have worked at their school since the inception of the program and represent a range of birth countries, languages spoken, and teaching expertise. All of the teachers have been trained in IB through IB workshops and/or internal professional development.

Table 3. Case Study Schools Demographic Data

School Number	Region/Country	Type of language program	% of exposure	Years Authorized	Ave Year Teach Exper	Local student %age	Lang of Instruc	Add Lang	Lang Coor	Student Ages
1	IBAP	English language of instruction + AL	Cantonese 40 min/day	5	9	80%	Alphabetic	Logographic	yes	5-18
2	IBAP	English language of instruction + AL	Japanese 1 ½ hrs./wk.	1	10	95%	Alphabetic	Logographic	yes	5-18
3	IBAEM	English language of instruction + AL	German EC 36 min/day Gr.1-4 approx. 40 min/day	15	6	23%	Alphabetic	Alphabetic	yes	4-18
4	IBA	Dual immersion (Spanish & English)	English 50% of the time	9	15	94%	Alphabetic	Alphabetic	no	2-18
5	IBAEM	Dual immersion (Spanish & English) + Another AL	English 50% of the time French or German 3h/week	1	10	94%	Alphabetic	Alphabetic	yes	1-18
6	IBA	Dual immersion (German & English) Foreign language pathway	German 50% of the time alt. wks. (Gr 3-5) 1 hr./day or alt. wks. with bilingual teacher	9	7	95%	Alphabetic	Alphabetic	yes	5-14

4.2 Language Policy and Shaping Forces

There are several factors that emerged from the documents on language policy and the interviews that describe the forces that shape those policies. Some of the aspects address teaching philosophy, admissions, experience, training, host country education system and program structure.

4.2a Additional language teaching practices

The language teaching practices vary from school to school with numerous approaches and modifications to fit the local context. Three of the schools teach language in a dual immersion program while the other three have at least one pathway for an additional language strand. Several schools offer a third language option that matches a group of students' mother tongue or creates more opportunities for students to develop international mindedness through language exposure. The innovative strands were often implemented after a single practice proved insufficient for the diverse needs of the student population. In School 1, teachers felt that going to three pathways, or learning ability levels, gave more flexibility in serving the student needs, a change which was very much welcomed by the parents. One parent commented, *"I think there does need to be at least a third stream added for children in that middle ground. It was not enough. It was not working"* (School 1). The principal at School 6 referenced their newest additional pathway as *"an opportunity for new children to enroll in the school without the previous three years of additional language instruction"*. At the six case study schools, the percentage of time in the month that students study with or in the additional language ranged from 5% to 50% of the school minutes. Rationale for selecting the additional language was based on a wide variety of factors including a local population's influence, the academic needs of the students, requirements from the local or regional councils, the decisions of the school's governance body, an active group of parents, and the need to internationalize students with 21st century languages for a globalized society. In School 1, the majority of the parents interviewed listed the high quality additional language program as one of the reasons for selecting the school. In all the schools, the strong additional language curriculum helped to build the school's reputation.

4.2b Factors that influence additional language teaching practices

Mission statement

The mission statement in the case study schools is a vibrant part of the overarching purpose of the teaching and learning. In successful schools, the policies and practices that affect teachers often are rooted in a compelling school mission statement. A deep understanding of the importance of language learning and its cultural relevance is critical in considering what a school's mission should be in the 21st century (Boix-Mansilla & Jackson, 2011). Coleman and colleagues (2012) found that defining a mission, cultivating a culture of achievement and diversity, and evaluating and aligning school structures leads to the success of language learning on school campuses. In School 1, respect for the diversity of the school community is reflected in the school's mission statement that *"values diversity and works towards a sustainable future for all"* and shapes the school policy of no designation of a *"campus" language*. In School 5, the mission statement says that the school *"is open to the world and its times"*. That said, according to the interviews, there are parents as School 5 who believe the school mission should be more

aligned with the national system. In another school, the mission statement reads, “*success for students is accomplished by the linguistic heritages and traditions of our school community and the acquisition of a foreign language*” (School 6). School 4’s mission is “*excellence in education for globally-minded students*”. With a purposeful statement that values the goals of the school community, the mission statement becomes the principles and values that guide teacher and leader practice (Chance, 2009).

Admission policy

The admission policies are influenced by the nature of the schools’ governance and structure. Public schools must accept children to their school based solely on family address as existing within the school boundaries. Tuition and fees certainly influence certain admissions, with private school’s tuition charging a broad range of fees and available for families who can afford them. The case study schools may encourage admission for students of a certain language background or proficiency (Schools 3, 6), children of faculty and staff (Schools 3, 5, and 6), and children with siblings at the school (Schools 3, 5, 6). One school is oversubscribed and has a lottery drawing for those on the waiting list to enter (School 6). One school does not have facilities to serve the educational needs of students who have significant handicapping conditions, or severe learning disabilities (School 3), where another accepts students with disabilities, but counsels parents to move students out if they are not successful after a few years (School 6).

Program structure

Within each school there is a distinct program structure of organization for time and strategy in offering the additional language. In three of the schools, there is dual language instruction, with one of the languages being English. In the other three schools, there is an additional language time during the week, sometimes with multiple “*pathways*” or levels of language learning.

Dual language instruction. In School 5, the subject matter is divided between the dual languages. English (as AL) is used to teach science, English language arts, the arts, drama, and music. Spanish is used in the subject of Spanish language, math, oratory (public speaking) and tutorials. There are also additional language courses offered in French and German. In School 6, the dual language instruction is offered in all subjects, with alternate weeks of language: one week English, the next week in the additional language, German. The Program of Inquiry in School 6 is designed for activities to be assigned by language, with consideration for content embedded instruction to be predominately in the national language. In the dual language program in School 4, the primary year’s students have two teachers; one for English in the morning and one for the additional language in the afternoon. Teachers differentiate within their own classrooms. School 4 does not follow any language pathways.

Additional language as a class. In School 2, each class has one hour of language each week. There is also an additional 30-minute language time when the language teacher co-teaches with the classroom teacher and integrates language and cultural knowledge into the classroom unit of inquiry (UOI). The linkages are made through the transdisciplinary

skills, inquiry, or concepts. In School 5, students receive English instruction for two hours per day, with 50% of the additional language time devoted to inquiry and the other 50% to additional language skill-based instruction. The skill-based instruction is to support students to get the basic knowledge of the language to allow inquiry. According to the school prospectus, “non-native additional language speaking students are provided with language support for a minimum of two years from entry, or until their additional language proficiency has reached the level at which he/she is able to independently participate in all homeroom lessons” (School 3). In School 1, the PYP runs 40-minute additional language classes each day of the week. The diversity of the student population in School 1 puts great pressure on the school to differentiate their additional language instruction and assessment so the additional language program runs three pathways: one foreign language pathway, and two near native and native ability language pathways.

Need for remediation. With such demanding requirements for a deep knowledge of language use and expression, a percentage of students in additional language instruction struggle. In Case Study School 6, an alternate pathway was developed starting in third grade for students who were not able to be successful in a dual immersion language program in grades K-2. The struggling students moved to 80% of the instruction in the national language and 20% of additional language (as a standalone subject). In several schools, students have opportunity for tutorial support in the additional language (Schools 1, 3, 4, 5, 6).

4.2c Additional language program and responses to the influences

Language policy

The school language policy adheres to the belief that language is an instrument to construct thought and the identity of an individual as well as a tool for communication. The teaching/learning experience supports the three aspects of language acquisition: learning the language, learning about the language, and learning through the language. In School 5, the language policy is about openness of mind, language as a tool for communication, and appreciation of the language. *“We set some rules, for example, teachers of languages must speak in the target language or the language they teach, that teachers of the additional language and teachers of English work together, and we all respect the student mother tongue”* (School 5). In another school, policy states, *“Language underlies all learning, permeating the fabric of all we do in the education of our students”* (School 3). In School 4 the language policy stresses that language is an instrument to construct thought. This is supported by teachers. *“...language teaching and learning is a way to foster intelligence and thought; to teach how to think. The mind structures everything”* (School 4). In similar fashion, in School 5, a teacher stated, *“we believe that the needs of students can be adequately addressed if the language learning context is presented by subject matter and not simply as a set of skills to be acquired.”*

Support of the mother tongue

A student’s dominant language is seen as crucial for social/academic development and personal identity (School 3). The changing demographics of the student population continues to put pressure on the school to differentiate their additional language instruction and assessment (School 2) to meet the needs of all students. The expectation

in School 6 is for students with a third language, which is not taught at the school, to maintain their mother tongue through efforts of the parents and community. This is a concern for the principal as she noted that students without academic knowledge in their home language often struggle academically with two new languages at school. However, in School 5, classes for both dual languages of instruction are scheduled as additional support to meet some students' home language needs.

Social influences

In one international school, the parents are often both working and traveling, so caretakers are helping to raise the children. The language and educational level of the caretaker seems to have an effect on the language ability of the student (School 4). In a local public school, some parents are recent immigrants and are not able to secure adequate jobs or wages due to a low level of academic and language ability. The parents have a strong desire to support a higher level of education for their children, but don't have the knowledge to give homework support or the means to expose their children to museums or travel (School 6). A School 3 teacher noted that the reality of most internationally mobile families is that parents have to travel and there is a lot of transiency with school enrollment. In School 3 *"beginners coming in almost every month have a huge impact on how you structure things"*.

In several of the schools, there is no place locally to practice or listen to the additional language. In School 6, however, parents indicate that even though there is no local application to the language, the students are learning international mindedness through the language instruction and have the easy ability to learn a third or fourth language when they move on to high school. In Schools 1 and 4 the lack of exposure to the additional language, especially meaningful interactions beyond the classroom, was identified as one of the barriers to language fluency. School 1 experiences some push back from students and parents as the additional language rigor and expectations are very demanding and the language has no similarities to the students' mother tongue.

4.2d School support and professional development in tackling the challenges

Hiring practices

The case study school leaders indicated that the additional language teachers are very strong in their teaching abilities. The quality of the additional language teacher was considered to be the most influential factor in the additional language program at School 2. The principal stated, *"She is not only the best language teacher we have but she is probably one of the best PYP teachers we have here. She is so professional, so good, so open-minded that it has made it easier for language to develop. The students, the staff, and the parents admire and respect her and subsequently the additional language program"*. In School 3, the principal named the *"incredible amount of experience and background in the English as an Additional Language Department from different parts of the world"* as the strength of the program.

Teacher training

In all the case study schools, teachers participate in IB workshops. When they return to their schools from the training, the teachers share workshop experiences with other

teachers (School 6). The principal of School 3 acknowledged that teachers with years of experience still needed professional development on a regular basis. The relatively large professional development budget, as noted by the PYP coordinator, allows for a variety of professional development opportunities with relative frequency both in school and externally. As stated in the school policy manual, *“Staff are provided with opportunities in their professional development for raising the awareness of the process of language acquisition”* (School 3). While this is true, School 2 found that they *“don’t get many new IB trained teachers, so they have assumed the position of always having to induct, train and manage new staff”*.

Professional learning communities and collaboration

Collaborative planning meetings and time for professional learning communities was used to broaden teacher practices. Once a month in School 6, the leadership designates topics for faculty discussion. Language curriculum planning, pedagogy, and assessment were often the topic of such sessions. In School 6, teachers needed a stronger framework for the language scope and sequence and turned to other schools for assistance in collaboratively developing models. In School 1, the leadership is helping develop teachers’ understanding and skills in PYP through arranging co-planning opportunities, scheduling team teaching within the additional language team, and providing one day professional development event for the whole school wide additional language teachers so that there are opportunities for elementary team to interact with the secondary team. The vice principal felt that co-planning using the IB planners is *“self-monitoring and enables the sharing of practices and what’s worked well,”* and interactions with the secondary team helped direct the teachers’ attention to the language instead of *“being topic based and to find out what language we are teaching”* (School 1).

In School 5, the relationship between the Spanish and additional language (English) teachers is very important. *“You have to be very careful about who teaches what”*, so that’s why collaborative planning is so important. Book studies, the use of the OCC, and participation the global development of the PYP have also enhanced collaboration and supported the development of the professional learning communities not only in schools but among schools at an international level (Schools 3 and 4).

Student interventions

Tutorials in additional language instruction were available to students at all of the case study schools. Parents who were fluent in additional language were also called upon to help students working as volunteers in the classrooms (School 6). Other interventions included parent nights to give parents instruction on homework assistance, parent additional language courses, and guest speakers with additional language experience. In School 1, teachers tried to bridge the gap in student proficiency levels through involving parents in assisting students at home, such as eliciting parents in helping students practice writing what they learned in class in daily conversation. Sometimes parents helped their children with books sent home in English or they may be asked to talk about the units with their children so they can understand it in their mother tongue (School 3).

4.3 Additional Language and Inquiry

Interviews with participants across the six case study schools on the relationship between inquiry and additional language reveals two levels of implementation issues: One level lies in the positioning of and the alignment of additional language(s) in the program of inquiry, i.e., the relationship between additional language(s) and other subject matters; and the other level lies in the implementation of the inquiry approach in teaching additional language(s). Participants raised a list of challenges they have encountered at both levels and the strategies they have adopted in attempt to address these challenges.

4.3a Integrating additional language in the Program of Inquiry: Challenges and solutions

Models of integrating additional language in program of inquiry

The case study schools adopted different models to integrate additional language in Program of Inquiry. Among the six case study schools, three schools have the additional language as single subjects at the school. These schools usually adopted a curriculum model with a combination of fully collaborative units and additional language stand-alone units. For the fully collaborative unit, teachers *“develop the content for the additional language based on the central idea and inquiry activities listed in the English curriculum”* (School 1). The additional language teachers and the homeroom teachers work together to *“support the summative assessment tasks, giving students the language tools needed for the final product or performance”* (School 3). The stand alone units *“focus on the language and literacy skills”* (School 1) and *“language beginners need to learn, things like seasons, rules, colors, clothes, etc”* (School 3). Standalone units only *“connect with individual concepts in the program of inquiry when it happens to match with the language content”* (School 1). School 1 experimented with different proportions of fully collaborative and stand-alone units over the years, and found themselves most comfortable with one fully collaborative unit and five stand-alone units in their additional language curriculum. School 3 adopted a model with two fully collaborative units and four stand-alone units. In School 2, the additional language focuses on one specific UOI that is particularly relevant in each grade level and for the other units it takes on its stand-alone units. The standalone unit takes on a concept focus from a particular inquiry from the additional language perspective. It takes the form of one-hour language class per week and an additional 30-minute language class specifically tied to the unit of inquiry in each grade, where the additional language teacher co-teaches with the homeroom teacher to integrate language and cultural knowledge into the classroom UOI.

Three case study schools run bilingual immersion classes where two languages serve as the medium of instruction for the subject matters. They also have other additional languages as single subjects. In these schools, the integration models vary depending on whether the additional language is the medium of instruction for subject matters or the additional language is a single subject. In School 4 and School 6, the additional languages serve as the medium of instruction for the dual language immersion program and thus follow the same lines of inquiry as laid out in the Program of Inquiry. In School 5, the dual immersion languages follow the same lines of inquiry as laid out in the Program of Inquiry, but the single subject additional languages play a peripheral role in the Program

of Inquiry when the themes happen to match and there are some activities they can do to support the Program of Inquiry.

Challenges encountered across the case study

Unbalanced proficiency level in additional language and inclusion language at the homeroom. One major challenge participants in all schools identified is students' unbalanced proficiency level between the additional language and the language of instruction. Students' proficiency in school inclusion language is usually at a level that enables them to inquire about complicated issues in that language, but their additional language is usually quite weak and cannot live up to the expectation of the Program of Inquiry. Teacher 1 from School 1 said, *"Our last unit is about economic activity. Students do not have the vocabulary for 'slavery' in the additional language. How can I ask them to inquire following the program of inquiry?"* The difference in depth and capacities for inquiry is also observed by the parents. For instance, one parent from School 1 noticed that for the same unit of inquiry, the inquiry in the home room involves *"richer context"* that taps into culture and art, but the inquiry in the additional language mainly touches on *"low level"* functional language. Parents sympathize with teachers that the differences in entry proficiency level cause difficulty for additional language teachers to integrate their curriculum fully into the Program of Inquiry. *"For the additional language, it's rather difficult, because the kids have limited proficiency in writing and vocabulary"* (School 1). Teachers observed that when aligning additional language teaching with the Program of Inquiry, students cannot follow the teachers nor live up to the expectation of inquiry into the 'how' and 'why' when they don't even know 'what' in the additional language. A lot of times, when forced to align additional language teaching with the Program of Inquiry, teachers found themselves relying on the school inclusion language quite frequently and only translating the key vocabularies into the additional language, which made them question their identity as additional language teachers. Teacher 7 from School 1 pointed out that *"the students totally don't understand what I'm talking about when I speak in the additional language. So I have to use English to explain some of the concepts... In the end, I'm struggling with my identity. Am I a teacher of the additional language or a teacher of the school inclusion language?"* Teacher 4 from School 3 shares the same concern and is worried that such practices may make the learning experience less coherent for the students. *"We wonder if the students are aware that it is a joint venture [transdisciplinary]. Generally we feel students must think of their [learning] activities as separate."* The issue is further exacerbated when the school inclusion language or learners' native language and the additional language do not belong to the same language system, in which case students need much longer time to build up the basic competency. Thus, teachers are questioning the sensibility of exerting equal expectations on all additional language teaching to align with the Program of Inquiry regardless of the linguistic distances of the additional language(s) and the learners' native language(s) or the school inclusion language.

Collaboration between additional language teachers and home room teachers. Scheduling is another major challenge to the integration. Integration of the additional language into the Program of Inquiry demands co-planning between the additional language team and the home room teaching team. However, in most of the case study schools, additional

language teachers are assigned classes at the time when grade level homeroom teachers meet for release time. This arrangement excludes additional language teachers from the planning time and they have to rely on cross curricular collaboration meetings to plan with the homeroom teachers, which inhibits the scale and the depth of the co-planning and limits the communication and negotiation opportunities between the additional language teachers and the homeroom teachers. In School 1, the school assigns one teacher in charge of the additional language curriculum for one grade and finding a sub for that teacher so that the additional language teacher could join the home room teacher meeting for that grade. Furthermore, the heavy teaching loads make it harder for the additional language teachers to find time to meet each other at all. Teacher 5 from School 1 points out, *“It’s time, it’s always time. In my case I teach seven lessons from Monday to Wednesday. I need time to sit down and think clearly what we want to do with the additional language curriculum and then meet with them and take action. I need more time than I currently have.”*

The additional language teachers feel frustrated over the perceived lack of understanding and willingness to collaborate from their homeroom colleagues. Teacher 5 from School 1 told a story that for the unit on scientific symbols, the home room teachers planned inquiry around the messages conveyed by symbols in our life and the additional language team chose to teach different types of the written scripts in the language to explore the messages conveyed by texts. But the homeroom teachers did not recognize that plan as an attempt to align the additional language with the Program of Inquiry. Thus, teacher 5 pointed out, *“The challenge is how to persuade homeroom teachers that we are actually doing the same inquiry on scientific symbols.”* Furthermore, the additional language teachers’ attempt to integration is also thwarted by their status as a single subject teacher in the school curriculum. Teachers from different case study schools feel that the additional language as a subject matter does not receive due respect Teachers from School 3 feel most big events (e.g., birthdays, conversations, etc.) take place in homeroom and their subjects are considered less in the Program of Inquiry. Furthermore, they feel that in their school no one really is informed of what instruction they give in the classes because they come in to take the children for a lesson to give homeroom teachers time do to what they need. Following the Program of Inquiry developed by the homeroom is difficult in the additional language program since students do not have the assumed proficiency in the additional language. To make the curriculum integration really work, homeroom teachers need to be willing to collaborate with the additional language teachers to explore different ways of content integration. Teacher 6 from School 1 observed some resistance from their homeroom teachers when proposing to do the alignment through a different approach. *“When we proposed to explore the possibility of different ways of integration, they say ‘We have a set of teaching objectives and relevant resources accumulated over the years. We don’t want to change. We don’t want to teach like the additional language teachers.’”* Furthermore, a recurrent theme across the six case study schools is that the additional language teachers feel a certain level of professional isolation. As a principal commented, *“They just see themselves differently and this can often isolate them further.”* An additional language teacher (School 6) recalled a recent workshop experience. *“I don’t think we have too much support as a Language B teacher because language is language. When I went to the language in the PYP workshop, there weren’t very many Language B*

teachers who actually worked in UOI. Most were fairly new or did not really understand where their place was within the UOI. Many said that their schools didn't include their Language B teachers in collaborative planning sessions because they were used to cover the collaborative planning time [for homeroom teachers]."

Facility space. The additional language teachers' efforts to integrate into the Program of Inquiry are further challenged by the issues with shared spaces. All additional language teachers do not have a dedicated classroom since they are not assigned a classroom or children. If they do have a room, it is usually limited in size. The problem associated with no dedicated classrooms is the low presence of the additional language in classrooms. As the principal of School 1 pointed out, *"There is no dedicated classroom for our additional language teachers, so they have to go from classroom to classroom and they don't have their own space. They have some space to put student work on the wall but there is no additional language environment."* Teacher 5 from School 1 felt that the inability to create the additional language atmosphere obstructs inquiry since *"creating an environment in the language is important to inquiry."* Even for the wall displays in the additional language, there is difficulty of making it fit the students' proficiency level since students in one homeroom may belong to classes of different proficiency levels. Furthermore, the fact that the additional language teachers have to move from one room to another creates issues of ownership. Teachers in School 3 commented that it is hard to know where to put their materials and there is no space to put things up on the walls. All of these cause stress for the additional language teachers.

Despite the common challenges reported by teachers across the six case study schools, we do see some cultural differences across the case study schools. Teachers and parents from the Asia Pacific region seem to have a greater concern or struggle over the systematic learning of the additional language than teachers and parents from other case study schools. Teachers from School 1 feel that when aligning the additional language with the program of inquiry, it is hard to build a firm foundation about the language since *"you have to follow them in topic inquiry and do not have much freedom in teaching whatever you feel important about the additional language."* They feel there is a conflict between systematic learning of the additional language and full integration of the additional language and the Program of Inquiry. *"We feel the learning is too sporadic and don't know exactly what we are teaching about the additional language."* The time that can be dedicated to the development of the language is also largely limited and diverts the attention to either topic understanding or language learning. In Teacher 6's words, *"You spend half of the time doing inquiry and the other half on language knowledge. In the end, you achieve nothing. We only have 40 minutes in each class, how much can you achieve in 20 minutes?"* Teacher 1 feels that they have limited teaching hours and *"if I spend long time on inquiry, then a lot of language points I can't cover."* Because of the limited time available for this single subject, there exists an irresolvable tension between additional language teaching and the Program of Inquiry. *"We can't get both. If we follow the unit of inquiry, then we'll have to give up systematic learning of the language. Our time is so limited and our students start with such low proficiency levels."* The additional language teacher from School 2 also shared a similar concern. *"As an ALT, I think we tend to look at the language outcomes and the pressure to make the students literate in the second*

language or to meet certain language targets by certain year levels. I wonder if the pressure to teach certain topics or language content gets in the way of just letting language fit with what the students are learning.” A parent from School 2 talked about how she struggled over language learning under the inquiry approach and has been to the school to chat with teachers about the issue. She commented, “*That’s why I am glad that we have a national curriculum so that I can monitor things myself.*” Parents from School 4 scrutinized the tangibles like dictation and spelling errors, report card grades and external examination results. Teacher 3 from School 1 found that some parents carried their educational experience to their expectation for their kids’ education. “*They believe in the way they learned the additional language and they felt that approach could apply to their kids as well. So sometimes, they would request us to give their kids more homework and more drills.*” Furthermore, some parents from School 1 have a strong belief in the authoritative role of textbooks and were complaining that “*the teachers never cover the whole book*”, that “*what’s going on in the classroom does not really match the textbook,*” and that teachers jump between textbooks. “*They jump from here to there, and then go back here, and back and forth like this.*” Parents also look for completion. In School 5 parents complained that children don’t finish their AL textbooks and repeat content from one year to the next. Without the textbook parents think learning feels random at times as textbooks help parents know which direction to go (School 3). “*It’s not easy to change suddenly, especially for us who were taught with a textbook, a single one. As parents it is much easier to have a textbook and to know today you study this and you do the lesson.*” This expectation for treating textbooks as the authority to comply with is not in alignment with how the role of textbooks is conceptualized in PYP programmes. Many teachers and parents in the case study schools demonstrated an understanding of this in spite of wanting to have the textbook as a crutch. However, such concerns over the lack of opportunity to study the additional language in a systematic way and the expectation for compliance with the textbook is not salient in interview data collected from the other case study schools.

Strategies adopted by schools in overcoming the challenges

Despite the various challenges, additional language teachers across the case study schools adopted an array of strategies to alleviate or address the challenges.

Selective and flexible integration. First of all, the additional language program across the case study schools practiced a selective and flexible approach to integration so as to balance both the transdisciplinary and subject matter considerations. For each grade level, the schools that are not dual immersion selected one or two units to do full collaboration with the homeroom teachers and the rest of the units stay as stand-alone curriculum. Teachers feel that this selective approach to integration helps to do some trans-disciplinary alignments and at the same time keep the learning of the language more systematic. The selection of the fully collaborative units is often a joint decision with the homeroom teachers. Additional language teachers also follow some criteria in selecting the fully collaborative unit topics. They tend to select the topic that is elastic and easy to differentiate so as to potentially accommodate to different proficiency levels within the additional language classes. Teacher 6 from School 1 talked about how the team decided not to go with “*economics*” as a fully collaborative unit because of the complexity of the vocabularies involved in this topic. Instead they chose “*media*” as the fully collaborative

unit because the topic of media gives a lot of space for variation in terms of complexity of language involved. Another criteria teachers followed in selecting the fully collaborative units is that the unit has a certain level of concreteness. In School 1, buildings/architecture has once been brought up as a potential topic for a fully collaborative unit since the topic allows room for discussion of cross-cultural comparisons on the target culture traditional buildings and architectures in different part of the world. But the concern over the abstract and sophisticated language involved in cross-cultural comparison made the team reject the idea because *“you should not teach grade 1 students architecture because of the complexity of language involved in the topic. Furthermore, it’s not very interesting to the students. Although students can do presentations of different country’s architecture, in the end how much additional language are they going to learn and what literacy skills would they develop out of such learning activities?”* At schools (such as School 5) where they offer different types of additional language, adopting different strategies to connect the additional language with the Program of Inquiry depends on the proficiency level of the students and the time devoted to the subject. For the additional language that is used as the medium of instruction for bilingual immersion education, the curriculum follows the lines of inquiry laid out in the Program of Inquiry. For the additional language that is a single subject, they do not follow the lines of inquiry, but simply contain some activities or content that is related to the unit of inquiry. Legal statutes sometimes influence the choice of unit collaborations. In School 3, the two units chosen are a compromise to address some local governmental requirements.

Varied approaches to integration. The additional language teachers explored different dimensions of integration. Teachers find it’s hard to integrate at the topic level per se, but rather it makes sense to connect at the meta and macro level. Teachers at School 1 have tried to connect at the genre level. *“We are now looking at our language overview in the homeroom teaching and looking at other things that connect the additional language. So it might be, for example, they do poetry in the homeroom for a six week period, and then the additional language teachers pick up and take the poetry into another language experience. Or it might be something about narrative. Both additional language teachers and homeroom teachers do storytelling at the same time. So, we start to see collaboration in that way.”* Teachers at Schools 3 and 4 focus on the language level by identifying language opportunities that a unit might present and generate vocabulary lists or look for links to grammatical structures and literacy genres. In their additional language curriculum, teachers at School 1 focus on one unit to fully connect with English curriculum topic and seek the connection at the language level for the rest of the units. *“So for one unit we fully collaborate with English curriculum topic and for the rest of the units, we look into how the language could fit. I feel this arrangement is good!”* Even when the homeroom and additional language teacher decide to focus on the same topic, teachers often go beyond connection at the central idea level to make connections to the key concepts, especially when there was not a strong authentic fit to the central idea. Teachers at School 3 tried to connect the homeroom learning experience and additional language learning experience through targeting the same concepts in PYP, such as form, function, etc. As teacher 5 from School 1 concluded, *“There are different dimensions and levels of integration, ranging from the concept-level integration such as central idea collaboration and small concept alignment, to the language level integration such as*

genre alignment and simple vocabulary alignment". In School 5, some subjects have their own line of inquiry.

In the dual immersion schools, the homeroom teacher is the additional language teacher. This dual role allows for the full integration of the two languages into the Program of Inquiry. In the cases of students who are struggling with one or both of the languages, School 6 has a pathway of standalone additional language starting at grade 3 that separates the language instruction in a "pathway" for one hour a day. Students taking a third language also have stand alone programs, sometimes offered after school or through distance learning.

Strategies adopted by schools in overcoming the challenges

Strengthening in-school cross discipline collaboration. The case study schools have taken measures to help address the challenges additional language teachers are facing in aligning their curriculum with the Program of Inquiry. The school-level support mainly lies in strengthened cross-discipline, co-planning and learning opportunities within the school. School 1 arranges opportunities for teachers of all the subjects to discuss points of connection once every six weeks. School 3 arranges teachers of all subject matter to read key articles related to inquiry to establish common grounds and references for in-depth discussions on issues related to transdisciplinary inquiry. School 6 focuses on supporting the alignment through establishing a collaborative school culture with colleagues that trust and respect each other. School 6 schedules meetings every Wednesday afternoon for teachers to share everyday teaching experiences that could potentially benefit each other, including ideas from workshops. Teacher 2 at School 6 feels that this positive culture is very helpful, *"At our school we have the very good foundation of trust and of positive spirit where we learn from each other."* School 2 works on enhancing the opportunities for the cross-discipline collaboration between additional language teachers and the other subject matter. They designated one and a half hours each week between recess and lunch for collaborative planning between PYP coordinator and a year (grade level) group with all the specialist teachers involved to plan the UOI together, while the principals and the deputy cover the year group classes for them. The school found that the strengthened connection between the additional language teachers and teachers of other subject matter led to some shift in beliefs and teaching practices with regard to planning for inquiry. In School 2, not only the additional language teacher is actively involved in collaborative planning, but she is also given a leading role in curriculum building. She is the driver of concept based learning at the school and a leader of the all the specialist team. Because of the heightened status and the leading role the additional language teacher played at the PYP program, there is a much greater presence of the additional language in the homeroom classroom. The additional language teacher provided other teachers with posters for each of the concepts in both the school inclusion language and the additional language, and she also provided classroom teachers with as additional language corner that included a wealth of classroom-based resources centered on the UOI covered in class. School 3 has cross curricular meetings once a week and single subject teachers can call a grade together, but it rarely happens as they don't like to put on extra meetings. School 4 has cross-collaboration meetings every month for three hours. As in most case study

schools, the senior leadership team does classroom observations and walkthroughs to record what's going on in the classroom and help teachers reflect on their teaching.

Strengthen cross-school exchange. In addition to strengthening connections and interactions within the school, the case study schools also create opportunities for learning from other schools. The additional language teachers in School 1 get a chance to join professional development days with teachers from surrounding sister schools to discuss issues like how to engage students to inquire in an additional language, and to share online resources and models among different schools. School 3 arranges PYP introductory courses for schools in the neighboring area which start beginning teachers off with a large local support system. School 6 arranges opportunities for additional language teachers and administration to visit other schools that are running a similar additional dual immersion program. Teachers find visiting other schools particularly rewarding in developing models and creating curriculum. Teachers in all case study schools commented positively on opportunities to share experiences.

4.3b Inquiry approach in additional language teaching: Challenges and solutions

Challenges encountered across the case study schools

Limited language proficiency student for inquiry. One major challenge reported in implementing inquiry approaches in addition language teaching is students' limited language proficiency level. Teachers across different case study schools identified the biggest challenge is *"to get to the conceptual side when you are developing different writing script and different vocabulary is quite a challenge"* (School 2). Teachers observed that students do not have the necessary language skills to do research and inquiry, to explore concepts, to express themselves, or be reflective in the additional language. *"They use language to explore concepts and that is a challenge. The fact that it is a second language only makes it a little bit harder, because they need to understand the language first in order to explore something else... We want them to be reflective. It is hard for them to be reflective. It's even harder for them to reflect in an additional language"* (School 4).

Teachers feel that students cannot express concepts in an additional language and it is difficult for students to reach the highest level of thinking in a language when they are still developing basic knowledge and skills. Some beginner-level students don't even have the vocabularies to understand what the central ideas of a unit of inquiry are. As one teacher pointed out, *"I feel that there are some basic things about a language. How can students inquire without the basic knowledge in the language? If you don't have the basic listening and speaking ability, how can you inquire"* (School 1)? Teacher 5 concurred with her, *"We have to teach students the language first and then they can inquiry using the additional language. For foreigners, they have no knowledge in the additional language at all and then you ask them to inquire in that language. It's doomed to fail"* (School 1). Teachers also feel that certain steps in the process of inquiry are easier to do than other steps in an additional language. *"Some steps of the inquiry process, such as motivation by creating questions and answering questions through research, a kid can accomplish with scaffolding and the help of teachers and parents. But the last steps, such as creating solutions, thinking about them and generating new questions, are really difficult to do in a*

'foreign language' (School 5). Another teacher concurred with this noting the first and last stages of the inquiry cycle are more difficult for AL learners (School 3). Students' lack of basic proficiency in the language made teachers struggle over how to encourage students to speak out more in the additional language classrooms. Some teachers are concerned that students demonstrate little confidence to speak out in class (School 3), and they often rely on their relatively stronger language, rather than the additional language, to do inquiry (Schools 1, 3). Teachers are also debating over the language choices in class. "If they don't have the language foundations, they may have to inquire in their native language. How can you balance the language in your classroom" (School 1)? Teachers feel that it is hard to go through the inquiry cycle without relying on students' native language. "Some concepts are too difficult for students to learn in an immersion additional language class. It depends on the inquiry. Sometimes my aim is just for the students to tell me what they have found out in the inquiry in the additional language, in a very simple way, rather than engaging in the whole UOI" (School 2). Teachers in School 5 feel being pulled in two directions: one the one hand, students could take a greater advantage of the Program of Inquiry if they did it in their native or native-equivalent language(s), but on the other hand, they are very conscious that students need to be immersed in the additional language in order to acquire the language. What they end up doing is to teach the concepts in the school inclusion language and when they are sure students understand the basics, they carry on with the additional language.

Student variations in receptivity to and readiness for inquiry. The diversity of a student population also poses challenges to the implementation of inquiry approach in additional language classrooms. Students vary in their receptivity for inquiry approach not only in terms of their knowledge and skills but also in terms of their socio-cultural backgrounds. Teachers commented that students vary drastically in their language proficiency. *"We have students who have never heard a word of [the additional language] and students who are native speakers in the same classroom, and that creates a lot of levels of difficulty"* (School 6). Teachers also observed great variations in students' confidence in speaking out in class (Schools 1 and 3). Teachers attributed to the variations in the confidence to speak out to the students' family backgrounds. *"Our aim is to make our students as extroverted as possible. The culture of our school may not be the same as that at home depending on the families' cultural background"* (School 3). Teacher 5 in School 1 felt that some of her local students are not 'outspoken' and *"are used to, maybe due to family backgrounds, having the teachers telling us what to do. I feel they seldom have the desire to ask questions. They are also challenged in their abilities to make generalizations out of phenomenon. They are usually reluctant when they are not sure about the answers."* On the other hand, Teacher 4 in School 1 found that some of her students are at ease with the inquiry approach to teaching and are active in group discussion, whereas others who are not comfortable with the inquiry approach do not fare well in the class. This is echoed by teachers from School 4, where the teachers find that students are very used to teacher-centered approaches. *"It is hard, very hard, when they expect you to present knowledge. That's not what you want them to do. You want them to have an active role in their knowledge. It's hard when education is usually so teacher-centered. You are the one starting to carry the process. You are the one giving topics to work on."* Furthermore, teachers found that some students' home literacy practices in their native

language also hinder the inquiry approach in additional language teaching (School 6). They commented that some students from low income families do not have an academic level of concepts in their own language, which is a barrier to the inquiry approach since additional language teachers must find a connection for students to scaffold their knowledge and build higher order thinking in the additional language.

Limited instructional time to balance inquiry and language skill development. The second major source of challenge reported by the participants is related to the limited instructional hours that are allocated to additional language classes. Because in half the case study schools, the additional language(s) are single subject matters, the instructional hours range from 1.5 to 3 hours each week. The limited instructional hours cause challenges to the additional language teaching per se, as the principal of School 6 points out, “*What I hear my teachers say all the time is I just don’t have enough time to teach everything that I need to get in.*” Teacher 8 in School 3 noted, “*As a teacher you have to make every minute count. In 45 minutes, you ensure a balance of speaking, reading, listening and writing activities, covering grammar and allowing for the opportunity to achieve academic potential within the inquiry based unit.*” Teachers across the case study schools feel that this tension is increasing when adopting an inquiry approach to additional language teaching. Teacher 1 in School 1 feels that she is facing a dilemma. “*If I spend too much time on inquiry, I won’t cover much of the language curriculum.*” Teacher 7 from School 4 felt that the inquiry-based approach demands time, which is exactly the thing teachers feel they didn’t have, and the lack of time may make this approach less effective for language learning. “*I think that the reason they are not accurate is because they are using a very powerful tool while inquiring. We sometimes don’t have the time to stop and maybe sharpen the knife. There are some mistakes which are present in a considerable number of students.*” Teacher 8 in School 3 also sensed this tension between instructional hours and the inquiry approach. “*If there is time, it is good to encourage the children to inquire how the rules work. If there is no time, then I go back to the traditional way of explaining and hope [the students] recognize [the rules].*” Additional language teachers in School 5 have to shorten the unit of inquiry in order to address other aspects in the limited time they have during the week.

Limited resources. The third source of challenge reported is the resources available to support the inquiry approach to teaching. Teachers feel that the inquiry approach needs to be supported by a multitude of resources such as visual displays, reading materials that are appropriate for the additional language learners, and field trip experiences. Unfortunately, teachers across case study schools find that such resources are either limited in the additional language(s) or limited at their schools. For instance, teachers in School 1 feel that the resources available in the additional language are much more limited than that available in English both in print and online. It was pointed out in School 3 that there is a lack of differentiated materials, especially an ample supply of readers for ‘beginner English’ in areas like math and science. Teachers in School 6 want to do a unit in local immigration issues but there are no materials in the additional language on the topic, which makes it difficult them to carry out the unit of inquiry in the additional language. As Teacher 1 in School 6 pointed out, “*Finding a material that fits those IB units that’s at the language level of the students was an incredible challenge.*” So most of the time, teachers

have to rely on themselves to locate and create resources to support inquiry activities. Such demanding preparation work can be challenging to teachers, especially new teachers, given the various matters that are competing for their attention. The lack of resources is very often caused by the limited budget that a school can allocate to additional language(s). Like the principal of School 1 pointed out, *“If we have an endless budget, we would buy greater variety of resources such as more story books, more literature, more different sources the [additional language] team can put to use in the unit rather than solely on textbooks.”* Even in the cases where the additional language happens to be a common language that has a wide array of resources available in print and online, teachers feel that they need more time to organize the resources. The location of the school can be a challenge to acquiring materials in English. *“In this country, there is a huge market for international textbooks. Getting the books that we want here is a challenge. They are quite expensive because they are either American or Australian”* (School 4).

Teacher resistance to inquiry. The fourth source of challenge comes from the additional language teachers’ perception and understanding of inquiry. Although the teachers feel a trans-disciplinary program of inquiry is the essence of the IB PYP programme and perceive it positively for student development, they have a few issues with this approach to additional language teaching. First, they feel that the inquiry approach has certain limitations and cannot serve the additional language teaching as well as the primary approach. Teachers from School 1 feel that the additional language learning cannot entirely rely on inquiry-based approaches. For instance, Teacher 1 in School 1 argues that *“language contains some basic things which students cannot learn solely through inquiry.”* Teachers in School 5 feel that there are certain aspects of the additional language (e.g., reading, writing, listening and communication skills) that are easy to be embedded in the unit of inquiry, but there are other aspects (e.g., grammar and phonetics) that are more difficult to include. Teachers from School 3 are also struggling with this approach with additional language teaching. *“It is hard teaching a language as inquiry-based”*. One teacher from School 3 felt it challenging to see eye to eye with the idea that *“[teaching] should be when something is authentic, when inquiry is authentic,”* and felt it problematic to make everything inquiry in additional language teaching. As one principal pointed out, for any school starting the PYP journey, striking the balance between inquiry and discrete language skills would be a big dilemma. *“It is the balance between transdisciplinary learning and discrete skills. There is still the danger of going too far down the discrete path because that is where the ALT usually feels more comfortable, particularly when they are not used to working with the PYP, or they can go too far down the inquiry path and not do the basics. I am not against inquiry but sometimes when teachers make meaning of inquiry they forgot to do the basic language requirements. I say, if they can’t read, they can’t do inquiry”* (School 2).

In addition, some of the teachers feel that inquiry-based learning might go against their previous learning experience and professional training. *“Teaching language has a huge connection with the way teachers were taught. Many times, although you understand it, when you go and teach language, you teach it in the way you were taught”* (School 4). Some case study schools see divided perception and receptivity towards inquiry approach among the teachers. As Teacher 6 from School 5 pointed out, *“There are two traditions or*

cultures at the school, the English (those who under English influence) and the Spanish. The English are accustomed to inquiry much more than the Spanish speaking. On the one hand, we have the way we would like to teach grammar through writing. On the other hand, we have the Spanish culture has always taught grammar and orthography as something independent.” The diversified teacher profiles bring challenges to the implementation of inquiry, but at the same time also bring promises as it provides opportunities for teachers to have their beliefs challenged and see alternative approaches. Third, some teachers also feel lacking in the necessary skills to implement inquiry in the additional language. *“It is very hard to guide them to inquire. You have to work a lot to guide and question. It is something open, something wide to ask questions and start to inquire on their own”* (School 4).

Strategies adopted by teachers in overcoming the challenges

Scaffold and utilize prior knowledge. To address the challenges from students’ limited language proficiency, teachers actively bring in students’ prior knowledge to support the learning experience. For instance, Teacher 1 from School 1 allows her students to use their relatively stronger language to do inquiry and then she will rephrase the content in the additional language for them. Teachers from School 5 use the school language of instruction to initiate the inquiry, motivate the students to do the inquiry, draw the lines of inquiry and set the basic concepts. Teacher 6 from School 3 assesses what students already know about the topic of inquiry in their mother tongue(s) and anchors her additional language instruction around students’ prior knowledge in the topic. Furthermore, teachers also try to provide various scaffolds to support students’ inquiry process in the additional language. As teacher 2 in School 1 pointed out, *“for students with weaker language foundation, when we ask them to inquire in the language, they struggle. So we need to give them more scaffolding to help.”* Teachers scaffold inquiry through giving support on vocabulary (e.g., provide word lists, pre-teach relevant sentences) and enhancing students’ inquiry skills through guided inquiry. Teacher 7 in School 3 tends to pre-teach the language students need for inquiry. To enhance students’ receptivity to the inquiry approach, School 6 uses a lot of front loading experiences, such as field trips, to get students excited to pose questions for inquiry. To help students get more confidence in speaking out loud in additional language classes, teacher 5 in School 3 actively uses the Learner Profile to award and encourage students. *“That student (pointing) received a Learner Profile award for being a communicator and a risk taker because he started raising his hand and trying his [additional language].”*

Differentiation and support. To deal with the variations in students’ proficiency levels in the additional language(s), teachers in the case study schools have been relying on collaborative learning activities to build the students’ strengths during inquiry. Differentiation has been another common strategy teachers adopt across case study schools. Differentiation for students with disabilities is done through streaming students into classes of mixed proficiency levels (as in School 1 and School 6) or through the language support department (School 3 & 5), Learning Centers (School 3, 5 & 6), providing education assistants or support teachers (School 1 & 4), and utilizing pre-service teachers who are doing teaching practicum at the school (School 6). Furthermore, schools vary the way inquiry is conducted in response to the topics and the student populations.

For instance, School 3 pulls out the beginner-level students for additional language instruction and these students are not expected to do the unit of inquiry. Only the intermediate learners are expected to have more to do with the units as they can make more meaningful connections. Teachers also vary the inquiry activities students are expected to do on different topics. Teacher 4 from School 1 engages students of different proficiency levels in different levels of inquiry. For the students who have a stronger language foundation, she engages them in in-depth inquiry of an issue (e.g., to understand the different writing styles in an advertisement in different countries and languages), but for the students who have weaker language foundations, she engages them in a simpler level of inquiry (e.g., to identify the words in the ads in the additional language). Similar practices are reported in School 3, where the beginners focus on simple vocabularies, and the intermediate and advanced students look at persuasive writing related to the same inquiry topics. Teacher 1 from School 1 engages students in inquiry-based learning in some topics but build the language foundations first before engaging students in inquiry for other topics. School 5 varies the nature of inquiry that students of different ages are expected to experience. The youngest students are engaged to do shorter, more directed inquiries, and as students are gaining experience over the years, bigger projects are brought in. Thus, in earlier grades, mother tongue is used to initiate the units of inquiry and then move on to use the additional language as a source of information. By 5th and 6th grade, additional language plays greater role in initiating and forming the learning experiences in the units of inquiry.

Adapt the inquiry process. To reconcile the perceived tension between the inquiry approach and additional language teaching, teachers try to redefine the focus of inquiry and the role of inquiry in additional language teaching. Teacher 8 from School 3 gives inquiry a role in additional language teaching that is acceptable to her. *“There is a certain area that is just repetition and drills, but PYP recognizes that too. Some subjects just have to be taught. More importantly inquiry is ‘a way of giving them ownership’ of what they are learning instead of just learning from things by rote.”* Thus, to her, the inquiry approach is to help balance students’ additional language learning experience. Teachers in School 5 embed the development of language reading, writing, listening and speaking skills in inquiry activities, but teach grammar and phonetics apart with a few activities that promote some kind of inquiry. Teachers in School 1 try to adopt a broadened view towards inquiry to redefine inquiry in the context of additional language teaching. For instance, Teacher 1 from School 1 focuses more on fostering students’ attitudes towards inquiry rather than the depth of inquiry. *“I feel we don’t need in-depth inquiry in the additional language. I just encourage students not to be afraid of making mistakes, encouraging them to be willing to express in the additional language and form the habit of expressing their opinions.”* To Teacher 5 from School 1, there are different manifestations of inquiry. *“I feel we need to broaden our view towards inquiry. It’s not just inquiry about a topic, but rather many language phenomena are involved in inquiry. Inquiry is the active process of achieving goals through guiding questions.”* Teacher 1 from School 4 defines inquiry as ‘a way of living’ in the classroom. *“Apart from dealing with inquiry through units, inquiry is a way of dealing with the class, with everyday situations. Situations [like] what happened with a child on the playground fighting with another. It’s a way of asking, making them think by themselves or to help them find in themselves the*

answer or the new questions. It's that, why do you think, how can it be, or ... let's discover, let's know more about the human body. How can it be that food ... I use it like a way of living in the classroom." Thus, through redefining inquiry in a broader sense, teachers find it easier to adopt it in additional language teaching.

Develop resources. Teachers across all the case study schools feel that the lack of sufficient resources to support the inquiry approach is a major challenge. However, their attitudes to locating and recreating resources are different depending on their cultural backgrounds. Whereas teachers in School 1 view the need for teachers to create resources as limiting and constraining, teachers in School 6 tend to view it as liberating. *"A lot of [materials] have to be hand-made, have to be hand-translated. But teachers own it and that's kind of a wonderful process to have and it is making us strong."* The PYP program coordinator at that school also feels creating materials is positive among the teachers: *"We are creating everything ourselves and there is a lot at empowerment in the teachers and nobody is just telling you what to do. So that's a nice change."* Early years teachers in School 5 are happy as well as it supports differentiation. *"We have moved into doing more project work where you mostly have to design your own materials, which is hard at first, but actually allows you to adapt to your class to each group each year."*

Strategies adopted by schools in overcoming the challenges

Co-planning time. School-wide strategies in helping teachers to adopt the inquiry approach in additional language instruction may begin with co-planning opportunities among additional language teachers and enhancing additional language teachers knowledge and skills in inquiry-based teaching through both IBO and school-level professional development. School 1 releases teachers for planning time to do co-planning and reflect on the teaching and the curriculum. The school also arranges opportunities for additional language teachers in the PYP program to meet for a whole day with the additional language team in the MYP and DP programs at the school to discuss issues, share professional readings, and support a couple of school wide meetings to discuss issues related to the additional language teaching.

Professional development. To enhance teachers' knowledge and skills, in addition to sending teachers to IB workshops, most case study schools run their own induction programs for new staff. In School 3, the PYP coordinator gives an induction in the elements of the PYP to new staff at the start of the year. Six weeks into the year, a two day induction is offered to neighboring schools to train all beginning teachers together. At School 1, ten induction sessions are organized to get new staff familiarized with the essence of PYP. To ensure sufficient professional development opportunities for their additional language teachers, School 6 budgets separately for additional language program and IB training so that there will be substantial funding set aside for site visits, IB regional conferences and workshops. In Schools 3 and 5, teachers are encouraged to choose an area in which they would like to improve, select their own training, reflect on it, and apply it. Teachers in School 5 are beginning action research. School 2 established a relationship with a sister school in the country that speak the additional language including an exchange program with students and access to technology that links them to the 'world of

IB' to enhance teachers' knowledge and skills. School 4 engages their teachers to inquire into their teaching practices.

“Last year, we talked about innovation, change and differentiation. After that workshop, we developed a task for each teacher. They had to present something to their colleagues that involved innovation, creativity, and differentiation. We had teachers showing how they explored the concept of time, how they had to reflect upon what they thought that children knew but didn't, or that they knew in a different way. We tried to think about teaching from our own perspective and position teachers as inquirers, how we have to inquire into our own practice, how things change, and developing metacognition as ourselves. We support their understanding through their own experience ... or creating PYP staff meetings where we have a differentiation session and it's differentiated. We try to make them aware of what we are aiming at as they're experiencing themselves.” (School 4)

4.4 Language Scope and Sequence

In the IB PYP, language is considered the vehicle of instruction; not so much a subject. Therefore, everyone is a teacher of language as the math, science, and social studies subjects are permeated with language.

4.4a Relevance of the document to additional language

The data collected in all the case study interviews reveals that teachers consider the PYP Language Scope and Sequence (LSS) a useful document that serves as a guide for teaching and assessing the language of instruction; however, most of the teachers also believe that the LSS is too general for guiding additional languages (AL). Teachers understand that the PYP Language Scope and Sequence should be general and vague enough in order to suit practitioners across the world and every type of language, but at the same time, most of them believe that it should be more detailed for additional language instruction for the following reasons:

- The distance between each phase is wide and it is only accessible for a native speaker or a child who has had a great exposure to the language since kindergarten. It is considered difficult to follow even for those schools whose additional languages are taught on a 50% time basis, much more for those schools that only have 1 to 5 periods weekly advocated to AL (Schools 3, 5).
- The PYP Language Scope and Sequence doesn't take into account the variation of the language program and different pathways (student levels) followed in each school. At least three of the schools (Schools 1, 3, 6) organized groups according to proficiency levels in the target language. Therefore the same language was considered at the same time Language A and B. Since the school has multiple pathways, teachers felt that they needed to develop specifications of different outcomes and relevant indicators for the multiple pathways under the LSS general framework. In the other schools there was a system of differentiated teaching, or extracurricular classes (for talented or gifted, struggling students, and those with special needs), to meet the needs of the students (School 2, 6).

- The PYP document is developed for phonetic languages not for logographic languages such as Chinese or Japanese; hence, the sequence usually followed in teaching this type of language should be different. Furthermore, teachers felt that the Scope and Sequence did not take into consideration the difficulty and the particularities of logographic language and the characters. In this sense, some of the criteria of PYP Scope and Sequence do not apply for Chinese or Japanese (Schools 1, 2).
- According to some of the schools' prospectus, "*certain specific aspects of reading and writing are more appropriately learned in their own right*" (School 4), indicating that skill based learning is important in applying the knowledge of language to content specific instruction

Teacher challenges

The document is too general. The interviewed teachers understand that the LSS document is only a framework and schools feel the necessity of grappling with it. A detailed sequence would serve better to plan and to assess. With it, the AL teacher would know the expectations for a particular grade (Beginners, Intermediate) and know what it is aimed for (School 3). In addition, grammar is relevant in additional language progress but it is only implied in the PYP Scope and Sequence. Many teachers believe that they need a sequence with more intermediate steps between "phases", because there is a quick jump up to the metacognitive levels of the domain of the language (School 5). The teachers consider it hard work trying to adapt the Language Scope and Sequence and it is very time consuming to develop a school-based scope and sequence. Some have rewritten the LSS several times over the years trying to link it to MYP Language B phases' criteria, and every change in staff (teachers or administrators) may mean changing the work done so far (Schools 3, 4, 5). The work done comes down to the interpretation that each school or team has in relation to the students' needs. Some teachers express the idea that it is very difficult to write a common scale for each phase when students have different backgrounds and proficiency of the language. Some schools have accomplished this by writing different milestones for each pathway. At the same time they can see the same pathway may have different milestones in each school for the same phase (in this precise case they talk about years, not phases) (Schools 1, 3). Some concern was expressed about who writes the school document of sequencing. In two cases it is being revised by the head of the department or the language coordinator, but teachers think it should come from teachers (Schools 3, 5).

Workshop training is too general. Newcomer additional language teachers need more specifications in guiding them beyond what they already have with the PYP Scope and Sequence. In addition, the experience from the interviewed teachers with the language workshops was that they were too general, not implemented by teachers with additional language experience, and the attendees had little experience in integrating AL teaching in inquiry (School 2).

Teacher solutions

Overlay the LSS with standards from other countries or organizations. Additional language teachers need something more details in the sequence among phases (Schools 3, 5, 6) and believe that developing a unique scope and sequence for their school has become necessary. In dealing with the challenges, schools selectively use the IB document and complement it with external documents (Schools 1, 3, 4, 5, 6). Some of the teachers try to integrate the Language Scope and Sequence with the national curriculum such as the country's additional language curricula or the state standards. Most of the state standards mentioned are used as models because of their quality, but may not contain the compulsory standards of that country. Further, external sources of scope and sequence utilized by the schools include the Bavarian Standards, Virginia State Standards, Spanish curriculum, Key Stages from Britain, and the Victorian Standards from Australia. Other schools suggest additional information in the Scope and Sequence including detailed information on literacy expectations at each grade level (Schools 1, 3) and benchmarks for each subject area regarding language accomplishment (School 3). Specific teacher adaptations of the LSS from the schools were:

- Utilizing a scope and sequence from a German language consortium, as it reflects the three pathway concept (School 6).
- Utilizing a scope and sequence in relation to Chinese, as it reflects the nature of the additional language (School 1).
- Utilizing the Common European Framework, as it contains specific indicators, to supplement IB PYP Language Scope and Sequence in developing their school-based version (School 4).
- Creating standards and benchmarks for each subject area with literacy expectations (School 3).
- Adding a phase zero to cater to students who are non-language speakers (School 3).

Adopt curriculum to support the Language Scope and Sequence. Some teachers report using external curricula and benchmarks, with several of them coinciding with the European Framework of the Languages. Curricula mentioned are First Steps, Synthetic Phonics for Reading, and examples of best practices taken from many different places and schools the teachers visited. Other schools utilize the resource FLOTE as well as an article by Nag & Snowling (2012,) that highlights foundation language skills as being broadly similar across writing systems (Arabic, Kanada, Chinese, English). This reference supports the IBPYP Scope and Sequence document in that it compares phonological skills, orthographic knowledge, sound-symbol mappings, vocabulary knowledge and grammar knowledge (School 2).

Additional language teachers need support in language instruction and this could be in the form of sharing teacher created curricula across IB community or offering specialized workshops on additional language.

Assessment of language

The teachers consider PYP Language Scope and Sequence as a framework with a list of standards and benchmarks, not a real curriculum. In order to use the document for assessment purposes, it needs to show all aspects of learners constructing meaning, not just a set of benchmarks. Some schools believe the LSS needs to reflect the taught and the assessed curriculum (School 3, 4). Some suggestions from the interviewed teachers include:

- Utilize individual language profile cards because every child has a different language palette that they bring (School 3).
- Create a report card or report addendum including what had been covered, areas that had been focused on, and how the children have achieved in language (School 2).
- Use a rubric for assessment based on the Scope and Sequence, although it is 200 or 300 items and sometimes hard to remember accurately if the child has mastered that skill (School 4).
- Incorporate a student self assessment.
- Initiate an additional AL portfolio to conduct student reflection (School 3).

4.5 Impact of PYP and Additional Languages Program on Teachers and Students

4.5a Impact on teachers

Previous experience

The impact that the PYP has had on teachers may depend on their previous experiences. When teachers have similar previous training, the impact has been more to reinforce or enhance beliefs, attitudes, and practices. Workshops seem to change teacher attitude towards aspects of curriculum. Having attended a PYP workshop on assessment, one teacher returned with new insights about the ability of very young children to self-assess. *“There is a realization that even 4-year-olds are capable of self-assessing”* (School 4). Teachers are focusing more on how children learn. *“Going beyond language, the PYP has made us look at how children learn”* (School 5). Individual teachers in three schools commented that the PYP only strengthened their understandings. *“The PYP is a general approach that you have within you and you approach your everyday with it; even you have it before you come here and you hear something about PYP, and think I have a lot of those ideas already in me”* (School 3). Where teachers have been trained more traditionally, the impact has been greater. Teachers now challenge traditional approaches and have opened their minds to accepting and trying different teaching strategies. Greater value is placed in learning through structured inquiry and teachers are seeing inquiry in a broader sense. There is an understanding of the need to have a balanced view towards teaching, in particular finding the balance between discrete and inquiry teaching methods. *“Students need to study the linguistic knowledge, but at the same time they need to engage in activities to maintain their interest in the language and achieve a sense of accomplishment. Both are important”* (School 1). *“The principal commented about the challenge for teachers to balance the demands of discrete and inquiry teaching methods”* (School 2). One school did not identify any changes in adapting to the PYP. *“All teachers at the school had either started their educational career at the school or had chosen the school based on the PYP and its beliefs. They don’t know any differently. There has not*

been a shift in the teachers' attitude necessarily towards being an IB school. They bought-in right from day one" (School 6).

Views on language instruction

Some teachers expressed changes in belief systems regarding the teaching and learning of language. Language is being seen more as a tool than a subject to teach. In one school, teachers now believe that in order to learn the additional language, there first needs to be conceptual understanding in the mother tongue. *"They realized that to be bilingual was more than just learning another language; to do so well, concepts have to be well taught in the mother tongue first, then a second language can be added" (School 5).* This appreciation for the mother tongue is seen as a way of enhancing international mindedness in another school. Language teachers who were previously exam-oriented are learning to see how language can be taught through content. *"As language instructors, they are used to preparing students to obtain language certificates which are mainly exam-oriented language teaching. This contrasts with teaching language through content as carried out in the programme" (School 4).* This move necessitates the use of a variety of real texts rather than the traditional textbook. Presenting students with authentic language opportunities helps teachers move away from that language skill-based focus. More difficult has been the teachers' understanding and acceptance of meaning over accuracy in language learning. Teacher A adjusted her thinking on meaning and accuracy in language learning. She used to focus a lot on using the language accurately. But now she felt that expressing meaning is more important. She said, *"My grade six students have a lot of spelling errors in English, but I now focus more on expressing one's opinions rather than on the accuracy of the language form" (School 1).* Teachers are actively experimenting with having students engage more actively in class. Some have experimented with modeling the diagnostic approach to inquiry. *"The ALT modeled a diagnostic based approach to inquiry" (School 2).* Others are beginning to understand linguistic, grammatical dimensions into which students can inquiry. All these have made teachers less distant to students, communicating more, and enriching their relationships.

Collaboration

There has also to be a shift from seeing teachers in possession of all knowledge to being learners and sharing in the journey with students. *"Moving away from that place of perfection that is not real; the teacher having to know everything to learning with the kids. If you are a good PYP student, you are a good PYP teacher" (School 4).* This collaboration permeates relationships with students and colleagues supporting a positive school atmosphere of 'being in it together'. Teachers are talking more about good pedagogy and their conversations reflect greater understanding of inquiry and conceptual understanding. *"Teachers that are part of the PYP are having conversations about tuning into units and/or seeing kids get something conceptually; you see teachers at that level of talking about good pedagogy" (School 3).* Relationships are also fostered globally with increased use of technology for communicative purposes. *"The use of technology (digital friends, videoconferences and chats) has become common practice, promoting communication and enhancing relationships" (School 5).*

Instructional practice

Teachers who have changed their practice mention the importance of the transdisciplinary themes and being able to see the links to move beyond compartmentalizing the curriculum. This understanding has led teachers towards a more seamless way of teaching. *“Once they get in the groove and they can start working smarter instead of compartmentalizing it into subjects, they start seeing the links and it becomes a seamless way to teach”* (School 3). Using the planner has also impacted teachers and teaching significantly. Teachers feel the planner guarantees that all the essential elements and the attributes of the profile are addressed. Teaching is seen as more effective because time is taken to plan. *“Before that [attending PYP introductory workshops], she would often work under pressure without giving time to plan and fall back into more traditional teaching methods, overtime I've seen her have the time to plan and understand the PYP”* (School 3). Gaps between traditional ways of teaching and activity-based learning were lessened through planning. Teachers, accustomed to activity-based learning, are happy that the PYP encourages designing materials and making adaptations for each class. *“We have moved into doing more project work where you mostly have to design your own material, which is hard at first, but actually allows you to adapt to your class to each group each year”* (School 5). Teachers feel their understanding of the program and inquiry stands has been enhanced and the importance of hands-on activity supported. *“We've also had a couple of stellar AL teachers that understand the program, get the whole inquiry piece, and the PYP enhances their teaching”* (School 3). Those teachers who felt the program reinforced their beliefs and attitudes commented about the importance of the Learner Profile in supporting international mindedness. They were reminded that it is the key to culture and instruction so not only do they teach it, they model it. *“The Learner Profile is really just who we are. It is just the language we speak with children. Whether you are German teacher, an English teacher, a custodian, a front office clerk, or a principal, it doesn't matter. It is the language you speak; it is how we are with children”* (School 6).

4.5b Impact on students

Linguistic expertise

Most agreed that linguistically, students grow tremendously through the additional language instruction. *“Linguistically, they blossom. At the beginning of the year most students cannot speak, read, or write and do not understand a word, but by the end of the year, they can speak, read, write and do all kinds of things”* (School 3). They acquire a communicative competence in the second language that is natural, fluid, and with better pronunciation and grammar. *“Students have a much greater communicative competence. Mistakes don't hinder meaning; they can understand, get the message across, as they do in their mother tongue”* (School 4). When children learn the additional language from an early age, parents and teachers believe they pick it up easier and quicker; they have less of an accent, and are more fluent. Adults see improvement in reading comprehension, pace in the additional language that supports reading improvements in the mother tongue. *“Younger students now have a better foundation with the changes in methodology, better pronunciation, knowledge of grammar, reading comprehension and speed. Looking at 3rd grade, they read faster than the 6th grade kids at their age. Students even learn to read earlier in their mother tongue”* (School 5). Some teachers are aware of the effects of

language learning on the brain. “There are positive effects of learning another language and what it does to your brain” (School 3). Although it isn’t tangible, students’ brains are creating patterns that help them to develop strong conceptual skills. Children think and reflect; they take a more active role in their learning. As students become more critical and informed, they let teachers know what they want to learn. *“Kids let us know what they want to do more or they want to learn and it is always something good and something interesting”* (School 5). Students are more open not only to language learning but to learning to learn. *“They are learning to learn and be independent”* (School 4). By acquiring language skills and the capacity to do all kinds of things in a second language, students receive motivation necessary to succeed. *“By making learning fun and letting them love it, students acquire the skills and motivation needed to succeed”* (School 3). In another school, the majority of teachers make it a priority to design activities to motivate students through applying the language so as to get a sense of satisfaction, through giving them an enjoyable learning experience without much pressure, and through enhancing learning the language via interaction and doing (School 1).

The Learner Profile

The Learner Profile, along with the learning an additional language, makes children increasingly internationally minded. Students are open to other cultures through language learning. *“My children have opened up my eyes to another culture and linked what we like to the host country”* (School 2). Because the language allows them to integrate into a community other than their own, they develop a deep cross-cultural understanding. They are aware of others being slightly different, but they can make meaning from that integration that others would not be able to appreciate. *“Students become aware that there exists a whole group of people functioning and working in a different language, being slightly different to them”* (School 3). Coupled to the Learner Profile, the PYP attitudes are also used to define students. They show respect, tolerance, independence and have learned to work cooperatively in harmony with others. *“Kids in the PYP respect, share, tolerate, and understand the other, trying to work in harmony and learning to be a better person”* (School 4). It was commented that these attributes and attitudes are absorbed in the students becoming good citizens. *“Young children really absorb these attributes and it creates good citizens”* (School 3).

4.5c Negative impact on students

Struggle with additional language

Some children struggle with the mix of languages and when they cannot identify with a mother tongue, possibly showing uncertainty about their own identity. *“My youngest has difficulty choosing a first language whereas the older one has a strong identity. As children, having parents of two different nationalities who learned English, they felt they couldn’t speak any language properly. They don’t have a mother tongue anymore and that is sad”* (School 3). When promoting meaning and understanding over accuracy, some parents feel their children don’t give importance to effort and grades. *“Let’s go for no mistakes because... I also need to see a bit, their effort in order to give them a reward,... they don’t know that maybe it would be better or necessary that they have a minimum competence in order to pass the class or two”* (School 4). In one school, the teachers observed that students in general showed little interest in learning the additional

language, and that this lack of motivation is partly due to the fact that the additional language is a compulsory subject and partly due to the fact that the additional language shares little commonality with the national language and is hard to learn (School 1).

5. Conclusion and Future Research

The conclusions respond to the research questions posed in Section 1. The answers to the research questions and directions they point are important steps in advancing future lines of research. This section will first look at the research questions followed by recommendations and suggested lines for future research.

5.1 Summary of Research Findings

RQ1a: What are the national or local factors influencing a school's implementation of the PYP in relation to additional language teaching and learning?

Most of the language teachers in the case study schools have worked at their school since the inception of the program and represent a range of birth countries, languages spoken, and teaching expertise. All of the teachers have been trained in IB through IB workshops and/or internal professional development.

The factors that influence school's implementation of the PYP in relation to additional language teaching and learning include:

- Elected officials and policy
- Changing demographics and family mobility
- The public or private nature of the school
- Requirements for teacher qualifications
- Required testing and accountability measures

RQ1b: How do these contextual factors impact the development of the school's documented language policy?

Although the schools in the case study are all following the same IB framework for teaching additional language, it is a general guide to follow with flexibility for the local and national context. Additional language instruction is not the same in any two schools, or maybe in any two classrooms. The variables are too many to count and include teacher experience and professional development, local resources and constraints, parent expectations and support, and school environment and leadership. There are differences in the knowledge of curricular development and implementation across the schools in the different countries. The richness of educational systems allows moving the schools in a general framework but at the same time letting them adapt the program to their specificity. In specific:

- The selection of the additional language(s) influences: academic needs of the students, requirements from the local or regional councils, decisions of the school's governance body, a vocal group of parents, and the need to internationalize students with 21st century languages.

- Support for the mother tongue influences: the notion that some languages are seen as far more useful and valuable internationally than others (Reagan, 2005) and the belief in the development of the mother tongue is needed to build capacity in acquiring additional language skills.
- The model of PYP program offered influences: the need from the community for bilingual, internationally-minded students, the philosophy of the school board, the financial constraints of extra teaching positions, the availability of bilingual teachers, and the subject matter resources in the additional languages.
- The need for multiple levels of AL instruction influences: the wide range of student abilities, the requirements for testing and reporting, and the request of parents.
- School registration influences: giving preferential registration to students with fluency in the additional language to serve as models for linguistic and cultural instruction.
- Teacher qualifications: credentials required, hourly versus full time employment, language learning training, perspective as faculty member
- National and local testing influences: a reduction in time for subjects and lessons that are not tested a change in pedagogy from inquiry to memorization of facts, and pressure from parents for student success.

RQ1c: More specifically, how is the teaching and learning of the school's additional language integrated throughout the curriculum and particularly within the programme of inquiry?

More guidance is needed in the way this adaptation of the curriculum should be done. The most experienced teachers have the progress in the frameworks that they follow, or just have that sequencing in mind, taking into account the characteristics of the language (logo-graphic, phonetic differences), grammar progression, reading or writing progression. Some other teams need more explicit references (for newcomers or teachers with less experience in PYP) to guide instruction, monitor learning, assess progress, and report growth.

A. Models of integration

- Additional language as single subject: A mix of fully collaboration units (1 or 2 units out of the six units each year) where the contents of additional language is based on the central idea and inquiry activities in the program of inquiry and stand-alone units (4 or 5 units out of the six units each year) where additional language connects with individual concepts in the program of inquiry when appropriate.
- Additional language as medium of instruction: Fully aligned with Program of Inquiry

B. Strategies for integration

- Take a selective and flexible approach to integration so as to balance the transdisciplinary and disciplinary considerations.

- Expand integration beyond the topic level and central idea level to explore integration at the meta and macro level (such as connection at the genre level) or integration at the key concepts level
- Strengthen cross-discipline co-planning at the school level by setting aside sufficient time for co-planning between homeroom teachers and single subject teachers and by assigning single subject teacher a leading role in transdisciplinary curriculum development

C. Challenges of integration

- Unbalanced proficiency level in the additional language and the school inclusion language made it hard for additional language to follow inquiry activities to the same breadth and depth
- Lack opportunities to collaborate and co-planning with homeroom teachers due to schedule conflicts
- Additional language teachers frustrate over perceive lack of understanding and willingness to collaborate from homeroom colleagues and insufficient support and resources due to the fact that additional language being a single subject in the school curriculum
- Shared spaces with homeroom teachers lead to low presence of additional language in the classrooms
- Teachers and parents from the Asia pacific regions have a greater concern or struggle over the systematic learning of the additional language(s).

RQ2a: How are teachers introduced to the pedagogical approaches of inquiry and other educational philosophies embedded in the PYP curriculum framework?

The findings revealed that schools and personnel embrace the philosophy of the IB framework, follow the school's language policy, and work hard to implement the program to the best of their ability. Teachers collaborate, attend training, and visit other IB schools. The professional training teachers received include:

- IB workshops
- Site based training
- Staff meetings
- School visitations
- Informal conversations
- Collaboration within additional language teams and with homeroom teachers
- Experience in previous IB schools
- Interaction with the OCC and IB documents

RQ2b: What perceptions do teachers have of these approaches and philosophies and what kind of IB professional development opportunities have additional language teachers experienced?

Teachers are supported by their PYP coordinators, the school principals and the parents in providing excellent educational opportunities and experiences for students. The success of instruction is dependent on the quality of the teacher, as the teacher works within the context of the school and community.

However, the findings also revealed the conflicting tensions, connections and disconnections associated with the contested and ambiguous construct of ‘additional language learning and teaching’ and the issue of how teachers and schools translate IBPYP policy into practice. This research went beyond a search for a definitive description and into critiquing the complexity of additional language teaching and learning in International Baccalaureate PYP authorized schools. The findings confirmed that although the IB considers all subjects are equal and promotes all teachers as teachers of language regardless of language type, script or dialect, a sense of difference between languages and subjects still prevails in both literature and in practice and this has consequences for the IB Organization, schools, teachers, parents and students.

Teacher perceptions of IB PYP approaches and philosophies are:

- This is “good” teaching and learning
- It requires more time to create materials and plan than other approaches
- It is exciting to see students take charge of their own learning
- It requires additional collaboration and communication
- It may be challenging for students with a mother tongue as a third language
- It is challenging to deliver skill-based instruction in languages and math
- It is challenging to inquire into learning about a language

The professional development opportunities they were offered included:

- Conferences designed for “foreign” language teachers
- Government sponsored training from the additional language government
- Collaboration with other schools that offer the same additional language
- IB workshops
- Book studies

RQ2c: How do additional language teachers’ perceptions of the PYP bring about changes in their beliefs and paradigm shifts in their daily practice (including knowledge and skills) as a result of teaching within the PYP?

Convergence and challenges were highlighted across the six countries. The challenges specifically related to teacher beliefs and self-efficacy of PYP pedagogy, collaborative planning structures, models of integrating additional language in program of inquiry, availability of resources, student language proficiency including differentiation and assessment, transiency of students and staff, lack of external support to practice or develop fluency in the AL and socio-cultural influences.

In summary, teachers reported the following changes in their beliefs:

- Some have always had the IB philosophy
- Some develop a more balanced view towards language teaching pedagogy
- Some have broadened their understanding of inquiry-based learning
- Some are transitioning to changes and have kept some “traditional” units paired with some “transdisciplinary” units.
- Some are in dual immersion programs and fully embrace the belief of additional language as a tool for instruction.
- Teachers have become more knowledgeable about the PYP essential elements and characteristics of the IB
- Teachers have become more open-minded about trying new approaches

They also reported the following changes in their daily practices:

- Structured collaboration
- Creating new materials
- Alternative assessments and reporting
- Student differentiation
- Use of inquiry and problem based teaching
- Reflecting and revising
- Attending more frequent training and professional development
- Giving students more voice

RQ3: As a vehicle for learning in the PYP, how do additional language teachers use structured inquiry to help students build meaning and refine understanding?

The debate between skills based and inquiry based instruction impacted some contexts more than others. Differences were found in the Asian contexts, the findings support that of Jeon, (2006), Adams & Newton (2010) and Xu et al., (2008) who discuss the paradigm struggles related to teachers in Asian contexts.

The challenges teachers encountered include:

- Students’ limited proficiency in the additional language hinders their ability to research, inquiry, communicate and be reflective in additional language(s)
- Variations in students’ receptivity to and readiness for inquiry approach
- Limited instructional hours challenges the development language skill through an inquiry approach and make it hard to strike the balance between inquiry and discrete language skill development
- Limited instructional resource in the additional language(s) to support the inquiry approach to teaching
- Inquiry approach is not compatible with some teachers’ beliefs and prior professional training and experience

The strategies they adopted included:

- Actively bring in students' prior knowledge and provide various scaffolds (such as providing language support, enhancing inquiry skills, using front loading experience) to support the inquiry experience under the constraints of limited proficiency
- Employ differentiation to battle against the obstacles from student variation in proficiency level (e.g. language pathways, collaborative learning groups, different content and depth of inquiry for different groups of students)
- Redefine the focus of inquiry and the role of inquiry in additional language teaching to reconcile personal resistance to the inquiry approach
- Strengthen teacher knowledge and skills in inquiry-based approach through creating co-planning opportunities within the additional language team within PYP and with the additional language teams in MYP and DP, running school inductive programs for new staff, engaging teachers to do inquiry on their own teaching practices.

RQ4: To what extent do those changes and paradigm shifts of additional language teachers influence the effectiveness of additional language learning and the cultivation of international mindedness as intended learning outcomes for students?

A. Effectiveness of Additional Language Learning

- Communicative competence natural, fluid, improved pronunciation and grammar; greater concern for making themselves understood over mistakes made.
- More active role in their learning, teachers seen as fellow learners, some planning together on PYP planners, vocal about what they want to do and learn, more informed, critical, reflective, 'rebellious in a good way'.
- Demonstrative of the PYP attitudes: students show respect, tolerance, independence and have learned to work collaboratively with others.
- Linked to learning, more motivated, embracing their technological environment, appreciative of variety of resources and different learning strategies.

B. Cultivation of International Mindedness

- Building open, positive relationships, in school, and the local/global communities, accepting and respecting others.
- Connected to the world, 24-7 to meet up with anyone, anywhere, anytime.
- Appreciation for the culture of the AL language being learned, if a host country language, greater integration in the local community, deeper cross-cultural understanding, awareness of differences as well as human commonalities.
- Appreciation for Mother Tongue in conceptual understanding, accepting the need to use it to reinforce learning, links to identity make students feel equally accepted and appreciated on a personal level.
- Interiorization of the IB Learner Profile attributes, demonstrative particularly as communicators, inquirers, open-minded and risk-takers; understanding of others, learning to be a better person, all around good citizen.

RQ5a: *How is the PYP Language Scope and Sequence used?*

The majority of teachers work tirelessly to develop their own materials, adapt the Language Scope and Sequence, and devise benchmarks for student language acquisition. It is used as a basis to write their school-based scope and sequence in order to detail it more.

- Some have rewritten it trying to link it to MYP Language B phases' criteria.
- Some others have written different milestones for each pathway. But at the same time, the same pathway may have different milestones in each school for the same phase.
- PYP Scope and Sequence is complemented with other benchmarks (Bavarian Standards, Virginia State Standards Virginia Dept of Education, 2013), Spanish curriculum (Administración Nacional, (2008), Key Stages from Britain (Department for Education, 2013), Victorian Standards from Australia (ACARA ,2012). European Framework of the languages, First Steps and so forth).

RQ5b: *To what extent is it helpful to the teaching of the school's additional language and in assessing and reporting on student progress?*

PYP Language Scope and Sequence is considered a useful document that serves as a guide for teaching and assessing the main language of instruction. But it should be more detailed for AL:

- The distance between one and another phase is very big and it is only accessible for a native speaker.
- It doesn't take into account the variation of the language program and different pathways followed in each school.
- The PYP document is thought for phonological languages not for logographic languages.
- Certain specific aspects of reading and writing are more appropriately learned in their own right.

The criteria included in the assessment reports (or cards) are:

- Skills, grammar... taken from other curricula
- Conceptual understanding, taken from PYP.

Concern was expressed on the proposal of a new report model including children achievements, contents covered and areas that had been focused on. It seems too long for AL subjects that have few hours a week, because AL teachers have many groups. Rubrics for assessment are used; they are based on the Scope and Sequence.

RQ5c: *Are there elements (phases, stages, and learning outcomes) that could be developed further and improved?*

A double specification of the Scope and Sequence can be done by giving: 1) detailed information on literacy expectations at each grade level and 2) benchmarks for each subject area regarding language accomplishment.

There is a need for a general scope and sequence, something comparable among different schools, and more detailed in the sequence among phases (more intermediate steps between phases).

Teams of teachers need support and this could be in the form of sharing curricula across IB community or specialized workshops on AL.

5.2 Recommendations for Practice

The results of the findings have generated a range of recommendations. Consideration was given to the framework outlined in the IB *Standards and Practices* (2011) document when formulating the recommendations. The IB Organisation employs these standards to evaluate the success of their programmes and to “ensure quality and fidelity in the implementation of its programmes” (p.2). It was considered appropriate to group the recommendations from the findings under these Standards: Philosophy; Organisation – leadership and structure, resources and support; Curriculum – collaborative planning, written curriculum, teaching and learning, assessment. The following recommendations to the IB are derived from documents, interviews, and researched articles seeking to answer the research questions and are possibilities for enhancing the teaching and learning of additional language(s) in PYP schools.

Standard A: Philosophy

Recommendation 1- Embed an understanding of language acquisition skills for all IB teachers, not only additional language teachers.

Recommendation 2- Provide online community of practice for AL teachers to enhance their understanding and skills in structured inquiry in additional language teaching.

Recommendation 3 – Help AL teachers explore potential roles to balance additional language teaching and inquiry.

Recommendation 4 – Develop support services for parents to share and increase understanding of the PYP philosophy toward additional language.

Standard B: Organisation

B1. Leadership and structure

Recommendation 5- Design performance management in schools that focus on self-efficacy of all teachers including ALTs in regard language acquisition skills, knowledge and understandings.

Recommendation 6 – Provide clear connections between first and second language programs – planning, teaching and assessment.

Recommendation 7 – Raise the status of ALT teachers at the school and foster ALT teacher leadership in curriculum development.

B2. Resources and support

Recommendation 8- Provide time, space and PYP coordinator support for AL teachers.

Recommendation 9- Create workshops specific for additional language teachers and leaders who are designing language programs.

Recommendation 10- List the additional language of each school on the IB school locator or in a directory to enable schools to network with language-alike schools and models more easily.

Recommendation 11 – Post models on the IB website of adapted Language Scope and Sequence documents from different additional language models and pathways.

Standard C: Curriculum

C1. Collaborative Planning

Recommendation 12 – Incorporate ALTs into collaborative planning sessions to develop a balanced contribution to UOIs, inquiry, _transdisciplinary and concept driven instruction.

Recommendation 13 – Enhance homeroom teachers’ and AL teachers’ willingness to collaborate and create incentives and facilitative conditions for collaboration.

C2. Written Curriculum

Recommendation 14- Expand integration of AL in UOI beyond central idea level to explore integration at the meta and macro level (genre, concepts etc).

C3. Teaching and Learning

Recommendation 15- Include language acquisition knowledge in all IB PYP documents so that the philosophy driving IB language is embedded, eg: All teachers are language teachers.

Recommendation 16- Support schools in developing Teaching and Learning Policies to document the variety of teaching strategies used in classrooms and support metacognition in PYP students.

C4. Assessment

Recommendation 17- Develop an assessment regime to show growth and depth of language skills and knowledge that are effective, moderated and easy to monitor for individuals, classes and schools.

Recommendation 18- Develop tools such as a bank of references of oral and written language proficiency tests that could be used to identify student language levels in the additional language for determining student pathways and measuring student progress each year.

5.3. Recommendations for Future Research

These findings and recommendations raise a number of issues that merit further investigation related to additional language teaching and learning in IB PYP schools. More empirical work is required to extend the findings including the student survey.

Some other areas where future research might be directed will include:

- Self-efficacy of PYP teachers in regard to language acquisition skills, knowledge, and understandings.
- Profiling of AL teachers in PYP schools in order to capture and understand how background, pedagogical biases and philosophical beliefs impact their teaching.
- Differences and similarities of language acquisition across languages.
- Ways to bridge the perceived gap between specialist teachers, including ALTs, and mainstream PYP teachers.
- Documenting specific strategies used to inquire into ‘learning a language’ and ‘learning about a language’ across different language types.
- Documenting how national educational systems address the teaching of AL including foreign languages and co-official languages (other host country languages) spoken in the same country.

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Appendix

1 Letter of Consent Approved by IRB

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INFORMED CONSENT: ADDITIONAL LANGUAGE INTERVIEW

INVITATION TO PARTICIPATE

I, Carol Van Vooren, am a researcher and professor at California State University San Marcos. I am conducting case study research on additional language phenomena in the International Baccalaureate Primary Years Program. You are invited to participate in this study because you are a principal, PYP coordinator, additional language teacher, or a parent at an identified case study IB PYP school in this project.

PURPOSE OF THE STUDY

This study will document additional language practices across different school contexts looking at school language policies, cultural influences, teacher beliefs and practices, teacher training, materials, assessments, and student learning outcomes. The findings will be summarized to the International Baccalaureate Organization and might be used to provide insight into the effectiveness of additional language teaching and learning, demonstrate how the *PYP Language Scope and Sequence* might be used to support planning for the additional language curriculum, and/or inform the development of materials which will provide additional support and guidance to IB teachers.

DESCRIPTION OF PROCEDURES

If you agree to participate in this study, we will schedule an appointment for a one-hour interview. The interview will take place in a private room at your school site. Questions will be open-ended and will be focused on your experiences, beliefs, and practices as an additional language teacher at your school. With your permission, the interview will be audio-tape recorded.

I will offer you the opportunity to review, modify and/or approve the transcription of the interview through the contact information you give me. You will then be given one week to respond regarding any concerns or comments to the transcription. If you decide not to go forward, some or all of the data may be removed. A lack of response within one week after I have given you a copy of the interview transcription will be considered approval.

RISKS AND SAFEGUARDS

There are several risks involved with participating in this study. Each risk contains safeguards.

Risk 1: You may feel uncomfortable telling your experiences, beliefs, and practices as an additional language teacher.

Safeguard: In an effort to minimize this risk, I will not ask you anything personal. Instead, I am interested in your insights related to what your experience and feelings are as an additional language teacher. You may also stop the interview at any time or skip any questions for any

reason.

Risk 2: You may have limited time.

Safeguard: The time, day, and location of the interview will be established by you. You will also be advised that the interview is expected to last about an hour. However, you can stop or postpone the interview at any time.

Risk 3: You may be concerned about breach of confidentiality, that is, that your name or other elements of your identity like age, race or former affiliation with an institution may be made known to others.

Safeguard: I have taken many precautions to protect your identity. Your interview tape will be stored in a locked cabinet in my office. The only people who will listen to this tape are my research assistant and me. Your name will not be attached to the transcription. The consent forms will be kept in a separate file that is not connected with interview transcripts. The transcriptions will be stored in a password-protected file on my computer, which only I will have access to. I will only follow up with you to give you a copy of your transcript if you request one; and I invite you to read, modify, and approve the final version. The documents will be shredded and the tapes destroyed at the conclusion of the study, or by August 1, 2013.

BENEFITS

You may not have any direct benefit from sharing your experiences. However, your perspective will help inform a body of scholarly research in the teaching and learning of additional language in IB PYP schools.

CONFIDENTIALITY

Your identity will be kept confidential, as mentioned in the safeguards above. I will follow up with you to give you a copy of your transcript if you request one. You are also invited to have a copy of the final case study report.

VOLUNTARY PARTICIPATION

Your participation in this study is voluntary. You may skip questions that you do not want to answer. You can also end the interview at any time.

QUESTIONS

If you have any questions about the study, please feel free to contact me at any time by telephone or email cvanvoor@csusm.edu or you may contact The Institutional Review Board (IRB) for the protection of human subjects at irb@csusm.edu.

In the event that you require any support as a result of participating in this study you may contact the County Office of Education EASE counselors at 1.800.722.EASE

I have read and understand the above information and agree to participate in an audio taped interview for this research study.

Participant's Signature

Date

Researcher's Signature

Date

2 Case Study Interview Questions

Protocol

Prior to each interview, the participants were given the opportunity to sign a consent form to be interviewed. The following protocol was read to the participants before the interview and recording began:

This interview is designed to collect data about the nature of additional language teaching and learning in your school from the principal's perspective. It is estimated the interview will take between 45 and 60 minutes. I will be recording the interview now and transcribing it at a later date. You will be given the opportunity to review the transcription. You can stop the process at any time, including deleting information that you have already said or that has been transcribed. The information will be confidential and will not release your name. Do you consent to start this recorded interview?

Principal Interview

1. How long have you been a principal? At this school? What has been your IB training? Are you currently teaching?
2. What do you like most about the IB additional language philosophy and program?
3. What barriers do you see to the additional language program implementation?
2. What strengths do you see in your school's additional language program?
3. In what ways does the school's mission statement reflect the beliefs and values of the language program at the school? What indicators do you have that the mission statement is embraced by the teachers and school community?
4. What policies or community needs influenced the design and selection of the additional language(s) taught at this school?
5. Which stakeholders developed the school's language policy and how often is it reviewed?
6. What are the national requirements that must be met for additional language learning?
7. What is the additional language teacher credentialing requirement to teach the language at the primary level?
8. What role do parents have in additional language decision making?
9. What duties are the additional language teacher assigned in addition to teaching?
10. What expenditures are considered a priority in supporting additional language instruction?
11. What school structure is in place for a professional learning community with support for teachers to have continuous collaboration and systemic connections?
12. What other information would you like to add for this data collection that I might not have asked?

PYP Coordinator Interview Questions

1. How long have you been the PYP coordinator? At this school? What has been your training to qualify you for this position?
2. What is your role in the additional language program?
3. What do you think is the understanding among the language teachers as to what constitutes language learning in the IB?
4. In what ways are all teachers responsible for additional language instruction?
5. How is student language competency evaluated for grouping and placement in the additional language program?
6. What structures and support are in place for students' accommodations including instruction and assessment for special education and accelerated learners?
7. How does the additional language program meet the needs of the students and parents to reach the school's and their personal linguistic goals?
8. Is there a technology plan to enhance the additional language instruction at your school?
9. How does the school involve parents in their child's learning of an additional language? What are parents' expectations, perspectives on, concerns about additional language learning at their school?
10. Is the IB additional language program funded to the extent of meeting the student and teacher needs?
11. To what extent are additional language planners supported by the grade level teachers and the classroom instruction?
12. How is PYP Language Scope and Sequence used in designing the school's language curriculum? What do you think of the Scope and Sequence?
13. How do you support your staff in order to implement PYP? In what ways are the IB PYP essentials implemented in your school? Give some examples on how your staff implements the IB PYP essentials (concepts, skills, knowledge, attitudes, action) in the teaching (inquiry, differentiation, concept-based)
14. How do you support the teachers to assess additional language learning? Do students reflect about their knowledge and progress?
13. How do you monitor, assess and moderate the language strands (oral – speaking/listening; written – reading/writing; viewing – viewing/presenting) in your school in order to analyze assessment data to inform teaching and learning?
14. What would you consider to be the strengths/weaknesses of the IB Language Profile and Policy?
15. What other information would you like to add for this data collection that I might not have asked?

Additional Language Teacher Interview

1. How long have you been an additional language teacher? At this school? What was your training for this position?
2. How would you characterize your teaching philosophy and practice? (Prompts: balance, receptive, and expressive mode of oral language, written, and visual (viewing/presenting); strategies; grammatical focus or content-embedded; inquiry, constructive approach, transdisciplinarity; differentiation)
3. Has teaching in IB PYP program changed your beliefs about teaching? In what ways?
4. Tell me about your professional development and ongoing training for this position.
5. What other responsibilities do you have in addition to teaching? (Prompts: placement assessment; parent translation, etc.)
6. What do you think are the strengths of your program in order to support language learning, including mother tongue, host country language and other languages?
7. What do you think are the barriers to your program? Any challenges do you feel are hard to surmount in your context?
8. Tell me how student placement is decided in the additional language program and what is your role in that?
9. How do you meet the needs of all students, including those with special needs in the additional language program?
10. How would I see in your class that students develop language understanding at their own pace?
11. Tell me how you use technology in additional language teaching.
12. In what ways are parents involved in your instructional program?
13. Tell me how you work with other teachers in designing and implementing the additional curriculum.
14. In what ways is the PYP Language Scope and Sequence used in designing your language curriculum?
15. How could the PYP Language Scope and Sequence be improved to better assist you as a teacher?
16. In what ways is International-mindedness used in your additional language instruction?
17. In what ways do your students reflect upon their knowledge and progress?
16. What are the impacts of IB PYP program on your students?
17. What other information would you like to add?

Parent Interview

1. What languages do you speak at home? How long has your child(ren) been at this school?
2. What do you expect from the language program of the school? (languages acquired, levels ...) Is anything missing in the school language program? What are your perspectives and concerns about additional language learning at the school?
3. What is your understanding about the characteristics of the IB PYP program in general?
4. What additional languages should be included in the school programme? Why?
5. How do you feel about your child's grouping or placement in the language class?
6. To what extent is the allocated additional language time meeting the needs of your child?
7. In what way are you involved in your child's learning of an additional language?
8. What role do parents have in additional language decision making at your school?
9. What kind of activities does the additional language teacher ask your child to do?
10. How is your child assessed in additional languages and what feedback do you get from it? Has your child(ren) reflected about his or her knowledge and progress?
11. How do you view your child's improvement (both in terms of language development and other skills) as a result of the schooling experience at the school? (prompt: learner profile)
12. Do you have anything you want to add to this discussion that you haven't had an opportunity to say?

3 Additional Language: Student Survey Framework

The following framework was drawn from research in this study to elicit student data at a future time. These are potential focus group interview questions that could inform the construction of the student survey. Since the construction of a student survey involves a pilot-test to establish validity and reliability, we are only providing this information as an initial step towards the construction of survey items.

About You and your Family

- Collect demographic – age, gender, nationality (select option)
- What language(s) do the adults in your home speak? (insert answers)
- What language are you more confident using? (insert answer)
- What do you consider your language strength? (select – RWSL)
- What additional language would you choose and why? (insert answer)
- How would you rate yourself against the learner profile?
- Have you ever taken action on your additional language learning?
- Do adults help you with your language learning at home? If so how?

About Language

- Why do you think learning additional languages is important?
- What languages would you like to learn? Why?
- What is more important? vocabulary, sentences, questioning, responding, creating, viewing?

About Language Learning

- How old were you when you began learning an additional language?
- What do you find easy when learning an additional language? Why?
- What do you find difficult? Why?
- What do you do if you don't understand?
- Rate yourself as a language learner -Writing, Reading, Speaking & Listening
- Rate by preference each of these language areas (1-5 scale)
- How do you know your levels of language learning? What feedback, report ?

About School

- How long have you been at this school?
- Why did your family choose this school?
- What do you like about this school?
- What languages are offered at your school?
- What languages are you learning?
- What do you consider to be the key elements of the PYP?
- Can you explain inquiry? Transdisciplinary skills? Concepts?

About Language Teaching

- What would you consider to be the best way to teach a language?
- What teaching strategies have you enjoyed? (list)
- What do teachers do if you don't understand?
- What would be the perfect amount of time for language learning at school?

About your Community

- What community groups are you involved in?
- What languages are spoken in your community?
- Do you have an opportunity to use your additional language in your local community?

Sample Student Survey A

Protocol:

These questions are designed for the IB PYP student who is learning an additional language at the school. These questions may be completed independently, with a parent, with a teacher, or with a researcher. There will be no information on the survey relating the data collected to the student's name. All references to the data collected will be anonymous and confidentiality will be maintained. Students are not required to participate in the survey and may decide to stop at any time with no penalty. The results of this survey will be used to assist the IB in learning more about the perceptions of students and PYP additional language instruction.

Questions:

1. How old are you? _____
2. Why do you think it is important to learn another language?
3. What is your favorite thing about learning another language?
4. What activities do you do in language class?
5. What do you think of learning an additional language through inquiry?
6. Does the teacher help you to inquire? If yes, how?
7. Do you get to learn language at your own speed? If yes, how?
8. Does everyone in your language class do the same thing? If not, what do others do?
9. How do you know if you are doing well or not in your language ability?
10. What does the teacher want you to be able to do in this class?
11. Do you see any changes in yourself from learning the additional language?
12. Is there anything else you want to tell us about your other language class?

Sample Student Survey Draft B

Please complete the following information, selecting each box from “strongly disagree” to “strongly agree” just once.

Age: _____

Grade Level: _____

Years of studying the additional language: _____

Please indicate the degree to which you agree with the following statements:

Learning additional language through inquiry

	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
I feel what I am learning in my additional language is connected to what I am learning in the other subject areas.						
My additional language teacher constantly encourages me to learn the language through figuring out how the language works on my own						
My additional language classes contain a lot of activities that encourage us to come up with questions, search resources and find answers ourselves						
I feel that learning the additional language through inquiry is fun						
I feel that learning additional language through inquiry is effective in building up my language skills						
My additional language teacher is skillful in guiding me to learn the language through inquiry						

What have I gained out of the additional language classes?

	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
My communication skills in the additional language improved a lot						
I got a strong foundation in the additional language						
I feel myself getting more and more open/understanding to other cultures that are different from mine						
I feel myself appreciate other cultures more						
My ability to collaborate with others is getting better and better						