

Empowering Secondary Teachers to Support English Language Learners

by

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ABSTRACT

International schools work to serve students from a variety of different cultural and linguistic backgrounds. When a student is developing proficiency in a language, they have difficulty accessing content in that language. In order to support all of their students, including those developing language proficiency, teachers have to implement differentiated instruction.

This mixed methods action research study set within the context of an international school in Madagascar sought to empower secondary teachers to support the English language learners in their classes. The innovation consisted of a professional learning community focused on English language learners as well as a digital toolkit of resources aligned with the content of the professional learning community meetings. The group of seven participants met a total of three times over the course of three months during the first semester of the school year.

After their participation, they demonstrated little change in self-efficacy, although they did have a stronger understanding of the resources available to them within the local context. Through the innovation, the participants developed a common understanding of the concept of differentiation in addition to expanding their knowledge of teaching strategies. Most notably, the format of the professional learning community proved to be an effective and useful way to allow the participants to connect with one another, share their experiences, and gain relevant information regarding language acquisition and strategies for differentiation.

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CHAPTER 1

LARGER AND LOCAL CONTEXT

Although English is the primary language of instruction in most international schools, the majority of students in international schools have not been native English speakers. A lack of academic proficiency in English can affect secondary students' ability to access the curriculum in their classes. Furthermore, secondary teachers in various content areas were not sufficiently trained in providing differentiated instruction to meet the needs of all of their students, including those who were developing English language proficiency. This project facilitated professional learning opportunities for secondary teachers at an international school to enable them to better support the language learners in their classes.

Larger Context

Originally, international schools were developed by diplomats and expatriates who, despite their international placements, still wished for their children to be educated in a system which aligned with that of their home country (Hayden & Thompson, 2009). As such, their children, although living abroad, would experience limited disruption to their education. Some of these schools were developed under a diplomatic umbrella and created with the model of a national school in mind (Carder, 2008). Although many of the schools were originally developed to meet the needs of diplomats and expatriates, through the years, these schools began to accept more students from their host countries (Carder, 2008). Many of the host-country students were not native English speakers, yet their parents sometimes enrolled them in the hopes that they would develop their English language skills (Carder, 2008).

Demographic Shift

Since the beginning of the development of international schools, there has been a demographic shift in the student body of these schools. Linguistically-diverse families whose home language is not English saw the increasing significance of English as the primary international language (Berns et al., 2011; Hayden & Thompson, 2009). As a result, families who were linguistically and culturally diverse came to value schools where English was the primary language of instruction, also known as English-medium schools (Hayden & Thompson, 2009). As they saw increased value in their children attending these schools, the families of higher socioeconomic status actively chose to send their children to the schools so they could gain “a competitive edge,” such as access to higher education at English-medium universities in North America or the United Kingdom (Hayden & Thompson, 2009). This caused a demographic shift in international schools, and although some of the shift could be attributed to the presence of host country nationals in international schools, much of it could also be attributed to the growing prevalence of the English language in the global community.

According to Hayden and Thompson (2009), the idea of English as “the predominant world language” became more and more embedded, and research showed that the prospect of education at an English-medium university was a significant factor influencing parents to choose international schools for their children, regardless of their home language (p. 37). Those parents, and others, recognized that as an international language, English enabled those involved in business and politics on a global level to communicate with one another (Berns et al., 2011). Moreover, English is the main language in labor markets and international communications, so the demand of families

with the intention of providing their children with an education differing from that of the local or national systems will likely continue to grow (Hayden & Thompson, 2009). The demographic shift within the students who attend international schools as well as the growth of the international school system reflect both the growing influence of English as the primary international language and “the associated desire of many non-native English-speaking parents for their children to speak English as well as their own mother tongue” (Hayden & Thompson, 2009, pp. 16-17).

With the increasing number of international schools and the increasing significance of the English language, some of the schools have adopted curricular programs, such as the International Baccalaureate Diploma Program (IBDP) to meet their needs at the secondary level. The IBDP is a program originally developed in the 1960s for 16- to 18-year-old students, and experts from all over the world participated in its development (Hayden & Thompson, 2009). The IBDP is “the most well-established of the international programmes offered in international schools,” and it is increasingly offered in schools worldwide (Hayden & Thompson, 2009, p. 33). Instead of having an affiliation with a particular country or its educational system, the content of the IBDP has been intentionally developed to be international (Hayden & Thompson, 2009). However, the formal examinations are available in only three languages: English, French, and Spanish. Despite the limitations in terms of formal examination offerings, the students who participate in IBDP exams are both linguistically and culturally diverse and represent speakers of more than 200 different languages (Ballantyne & Rivera, 2014).

English as an Additional Language

Although the majority of students in international schools are non-native English speakers, English has been the primary language of instruction in most of these schools (Carder, 2008). As there was often not one prevalent culture within an international school, it could be difficult for students developing English language proficiency to integrate into the school community and find success in their classes (Neal & Houston, 2013). The concept of an English as an Additional Language (EAL) program to address second-language learners within international schools was introduced in 1997, and “the concept of inclusion was promoted, where EAL students would receive ‘support’” (Carder, 2019, para. 1). However, since then, just as there has been a demographic shift amongst the students of international schools, there has also been a shift in the curriculum and supports international schools employ to meet the needs of those students, particularly those for whom English is not their native language. Previously, there was not a need for schools to provide extensive EAL support, but because of the demographic shift, schools began developing a variety of ways to support their students. Due to a number of factors, including the linguistic and cultural diversity of their students, “international schools can serve as role models in the area of providing successful language programmes for second-language students” (Carder, 2008, p. 222).

Many content area teachers in international schools are confronted on a daily basis with students who are unable to access the content because of developing academic proficiency in English (Carder, 2008). Furthermore, these teachers have struggled to provide appropriate assessments for these students to demonstrate their content knowledge as the students were often not able to communicate in English at an adequate

level (Truong, 2017). These teachers needed solutions and strategies for their classes (Carder, 2008). Therefore, it was essential that content area teachers in international schools had professional learning opportunities which equipped them to provide appropriate instruction to all students in their classes, particularly those students with developing English language proficiency (Carder, 2008).

Situated Context

The situated context of this research took place at “The International School” (TIS), an international school located in Madagascar, where English was the primary language of instruction. Although it was an English-medium school, TIS was located in a country where French was one of two national languages and spoken by the majority of students. In the late 1960s, the school was founded as an independent school affiliated with the United States Embassy. There were a total of 70 students in grades one through eight, and the majority of students came from families working for a foreign company. Through the 1970s and 1980s, the school continued to serve the American and foreign business community, missionaries, embassies, and the United Nations. Beginning in the 1990s, the school started to attract more students, particularly from the local community, and in 1999, the school formally established a high school program.

Beginning in 2017, TIS started offering tuition remission awards to highly-qualified local students wishing to pursue their education, and in March 2018, TIS was authorized by the International Baccalaureate Organization to offer the IBDP curriculum. At the time of this study, the school had approximately 260 students in kindergarten through grade 12, and the student body represented about 40 different nationalities. When a student was admitted to the school at the secondary level, if the student was not a native

English speaker, then the student had to take the WIDA Screener, an English language proficiency assessment, to determine their current English language levels in listening, speaking, reading, and writing. The assessment is a flexible, on-demand assessment completed on paper by students and then scored locally by trained raters (WIDA, n.d.). The primary exception to this entrance requirement was if the student demonstrated such a low proficiency level that the assessment would not be a meaningful measurement. Then, depending on their performance on this assessment, as well as several other factors, they would be placed in a program to receive formal EAL support.

The EAL program at both the middle school and the high school was similar. In grades six and seven, the students took an EAL support class instead of French. In grades eight through 10, they also took an EAL support class, in place of French or another language acquisition class. Although it was a relatively small school, the administration tried to cluster secondary students who needed more support in particular academic domains together. Specifically, students who needed to work on speaking and listening were in one class, and students who needed to work on reading and writing were in another class. The focus of the support class was to develop the students' English language skills. The secondary students in grades six through 10 who received EAL support participated in the same content area classes as their peers. Some of these content area classes included the additional support of a Learning Assistant (LA). At the secondary level, there were two LAs, and the student support coordinator had worked to schedule the LAs in content area classes which were more language heavy. The LAs received training to provide additional support to students with developing English language proficiency and students who had identified learning differences.

At TIS, there were about 170 students at the secondary level, and of those students, 28 received formal EAL support. As students entered grade 11, TIS offers three pathways that students could choose from to obtain a high school diploma: students could pursue a TIS high school diploma; a TIS enhanced high school diploma; or a TIS high school diploma with an IB diploma. For the majority of content areas, there were two types of courses for students in grades 11 and 12: “high school level” courses and IBDP courses. If a student took only high school level courses, then the student received a TIS high school diploma. If a student took some IBDP courses for certificates, then they had the potential to receive an enhanced high school diploma. Finally, if a student took only IBDP courses, then they had the potential to receive a TIS high school diploma and an IB diploma. According to school inclusion procedures, the school encouraged all students to select the courses that best fit their interests, abilities, and educational goals. However, for some students, this choice was limited due to their developing English language proficiency levels. Specifically, students who still required EAL support did not participate in IBDP English Language & Literature courses. Therefore, they were unable to attain an IB diploma.

On the other hand, if a student was able to meet the criteria to exit EAL support by the end of grade 10, then they had more choices available to them. In order to exit EAL support, a student generally needed to demonstrate proficiency in four domains-- listening, speaking, reading, and writing--on a summative English language assessment. The final decision for exiting a student from EAL support was made in collaboration with the student’s classroom teachers, though, and based on teacher recommendations, some exceptions were made. Based on the English language proficiency levels of grade 10

students who received EAL support at the time of this study, it was unlikely that all students in grade 10 would meet the criteria to exit support by the end of the school year. This would limit the choices for those students in terms of the courses they could take in grades 11 and 12, and more significantly, it would limit their potential to earn an IB diploma, which could affect their post-secondary options.

After a student met the criteria to exit the EAL program, they no longer received any form of support. The majority of those students were successful in their content area classes after they exited the program. However, sometimes the students who met the criteria to exit the program struggled in their content area classes, particularly when they began taking IBDP classes at the start of grade 11. Although there were accommodations in place for secondary students who were placed in the EAL program, those accommodations were no longer viable in the IBDP courses in grades 11 and 12. For example, although a secondary student in the EAL program may have received extra time on written assessments through grade 10, once the student began preparing for IBDP assessment components, they generally practiced without the extra time. This was because their English language skills, although relatively low compared to their peers at the school, did not qualify them for accommodations through IB. Therefore, by the start of grade 11, it became more difficult to provide those students with support if they chose to pursue an IB diploma. Although the EAL program at the secondary level provided a number of key supports, it would have greatly benefited the students if all of their content area teachers were more familiar with ways to support their learning in all classes, including IBDP courses in grades 11 and 12.

EAL Support in IBDP Courses

If a student chose to take IBDP courses beginning in grade 11, then the student had a much harder time receiving support and achieving success in their courses. There was no additional support from LAs for IBDP courses. This meant that the level of support the student received decreased dramatically in grade 11. All students pursuing an IB diploma were required to take at least one course connected to studies in language and literature, and they were supposed to take this course in a language in which they were “academically competent” (International Baccalaureate Organization, 2020). At the time of this study, all students pursuing an IB diploma at TIS took this course in English regardless of their level of proficiency. The school offered French Language & Literature, but in order for a student to circumvent the requirement to take English Language & Literature as well, the school would have needed to offer an English acquisition course, which was not among the course options, nor was it part of the strategic plan for future course developments.

Some students did not require as much support, and they were able to progress in the IBDP and eventually graduate with a TIS high school diploma as well as an IB diploma. However, for some, the rigors of the IBDP proved too challenging, and either students did not receive the full IB diploma or, in at least one case, a student was prevented from pursuing an IB diploma only as a result of their English language skills at the end of grade 10. In order to ensure equity of access to the IBDP curriculum as well as increased success for all students, including those who received EAL support, the initial cycles of this research examined the current level of support provided by teachers at an international school and considered ways in which secondary teachers of all content areas

might have been able to better meet the needs of all of the students in their classes, including students who received EAL support.

Previous Research Cycles

The first two cycles of this study were conducted at a different international school with a relatively similar local context. At this first international school, the main differences were that students received greater EAL support in grades six through 10, and all students proceeded to take IB DP courses beginning in grade 11, as no high school level courses were offered. For the initial cycle of the study, semi-structured interviews were conducted with two high school teachers regarding their knowledge, experiences, attitudes, and beliefs about their ability to support English language learners (ELLs). Teachers were selected from science and social studies, who taught the highest number of ELLs. Both teachers identified the need for more time to collaborate with their peers in order to determine how to best meet the needs of the ELLs in their classes.

In order to facilitate this collaboration, for the second cycle of research, a professional learning community (PLC) was formed consisting of three high school teachers from different content areas. Each teacher at the school was a member of a number of different campus groups, including their grade-level group as well as their content area group. However, none of these groups was typically referred to as a PLC. Therefore, this PLC was the first of its kind in recent years on the campus. For the purposes of this study, a PLC refers to a community of educators who come together to learn and develop their teaching practice. Before the PLC meeting, each of the participants completed a semi-structured interview and survey. An inductive coding of the interviews identified a focus on comprehensible input, so the PLC meeting focused on

the concept of comprehensible input as it related to providing differentiated instruction for ELLs. Then, when analyzing the transcript of the PLC meeting, the most prevalent theme was the importance of relevance and real-life applications, both for the teachers in terms of the content of the professional learning and for the students in terms of the content in the classroom. The interviews and surveys after the PLC meeting revealed the potential of a PLC to help equip secondary teachers to meet the needs of the ELLs in their classes, but suggested that more than one meeting would be more effective. Furthermore, the content of the meetings should be immediately relevant for the participants and their teaching practice.

Problem of Practice

In terms of the support ELLs received at TIS at the secondary level, in grades six through 12, there were two teachers who provided EAL support to students who qualified because they had developing English language proficiency. At the previous school, for four years, I provided EAL support to all students who qualified at the high school level. I did this in addition to teaching high school English and IB DP English Language & Literature. Beginning last school year, though, I became a full-time English teacher. Regardless of this transition, I continued to work with students who received EAL support in grades eight and nine, and therefore, I had a personal interest in this problem.

Even though my role and local context had changed in recent years, at TIS, when a teacher at the secondary level encountered a student struggling in class and the teacher believed that the issue is related to the student's English language skills, the teacher would sometimes reach out to me or one of the EAL teachers for assistance. However, beginning in grade 11, we were limited in the amount of assistance we could provide the

students who pursued an IB diploma, particularly when they began completing internal assessments for IB DP courses. Those internal assessments often had specific guidelines regarding the amount of feedback and assistance teachers could provide. Due to the limited number of support teachers as well as the limited amount of support they could provide, it was beneficial for the school to build capacity with all secondary teachers, regardless of content area, to better meet the needs of all of their students, particularly those who required additional support. This necessitated an instructional shift at the school where all teachers saw themselves as capable of and responsible for supporting the ELLs in their classes. The problem of practice was that all secondary teachers were not empowered to support ELLs. Specifically, the teachers lacked empowerment in the form of confidence and professional knowledge on how to support ELLs. To empower them entailed equipping them with knowledge, skills, and understandings regarding language acquisition and differentiated instruction for language learners. In this particular context, ELLs includes students who received formal EAL support as well as other students at the school who were developing academic proficiency in English.

This worldwide shift in linguistic focus resulted in the need for teachers who were equipped and prepared to support students who lacked English language proficiency in their content area classes. In order for teachers to successfully meet the needs of all of their students, including those who were linguistically and culturally diverse, the teachers had to be proactive in continuously improving their practice through professional learning opportunities. The purpose of this project was to collaboratively develop the knowledge of a group of secondary teachers regarding how to support ELLs in all content area classes.

Research Questions

The following research questions were addressed in this project:

1. How and to what extent did participation in a professional learning community (PLC) affect:
 - a. secondary teachers' self-efficacy in supporting ELLs in their classes?
 - b. secondary teachers' reports of the implementation of differentiated instruction for ELLs in their classes?
2. How and to what extent did secondary teachers perceive the effectiveness and usefulness of a PLC?

CHAPTER 2

SCHOLARLY AND PRACTITIONER KNOWLEDGE

Although English is the most common language of instruction at international schools, the majority of the students have traditionally been non-native English speakers (Carder, 2008). This reflects a demographic shift in the student population, and TIS was in the process of adjusting their instruction to meet the needs of a changed student population as a result of this demographic shift. In particular, content area teachers at the secondary level were not empowered to support ELLs in their classes. Second Language Acquisition Theory was used to better understand the way that students acquire second languages, and Stanford University's Key Principles for ELL Instruction supported the content of the PLC meetings. Furthermore, a PLC which applied aspects of Adult Learning Theory was used to facilitate teachers' professional development and increase their knowledge and self-efficacy regarding differentiated instruction to support the ELLs in their classes.

Second Language Acquisition Theory

According to researcher Stephen Krashen (1981), bilingual education from school to school has varied in at least four ways: language use, amount of each language used, type of English as a Second Language (ESL) instruction, and purpose. The purpose of the EAL program at TIS was to help students adjust to English as the primary language of instruction. At TIS, students who lacked English language proficiency were required to take a separate class focused on developing the students' English language proficiency. Outside of their EAL support course, the students spent the rest of their school day with native English speakers while attempting to follow an English-only curriculum. Due to its

applications to the EAL program at the school, Second Language Acquisition Theory allowed for a more informed perspective of the processes involved, as students acquired an additional language. In this case, the additional language was English. With an enhanced understanding of the theory, and its applications to the students, the secondary teachers at the middle and high school could provide better support to the ELLs in their classes.

The Five Hypotheses. Second Language Acquisition Theory consists of five hypotheses. Of the five hypotheses, the final two were the most pertinent to this research. However, an overview of all five is provided here for the purpose of presenting a complete picture of the theory.

First of all, the Acquisition-Learning Hypothesis delineates the difference between acquisition and learning. According to the hypothesis, “acquisition is picking up a language” while “ordinary equivalents for learning include grammar and rules” (Krashen, 1981, p. 56). Based on this hypothesis, the students at TIS acquired English in their content area courses, and they were limited to learning English in their EAL support course as well as in their English course, to an extent.

The second hypothesis is the Natural Order Hypothesis which states that students acquire grammatical structures in a predictable order (Krashen, 1981). Students acquire certain grammatical structures earlier in the process of second-language acquisition, while there are other grammatical structures which students typically acquire later. However, the mere existence of the natural order does not suggest that teachers should follow this particular order with their instruction (Krashen, 1981). Particularly for the EAL and English teachers, it was helpful to have an awareness of this hypothesis in mind

when designing curriculum for their EAL support courses so as to avoid the tendency to teach the language in the natural order.

The Monitor Hypothesis, the third hypothesis of second-language acquisition theory, focuses on the role and significance of conscious language learning, as opposed to language acquisition. According to the Monitor Hypothesis, acquisition, or subconscious learning, is responsible for fluency, and conscious learning has only one significant function: to act as an editor or monitor (Krashen, 1981). In this sense, EAL and English teachers who were providing direct language instruction could apply knowledge of this hypothesis to their practice by providing students with strategies to edit or monitor their language usage in both their speaking and their writing.

The fourth and fifth hypotheses of the theory had the potential to provide the greatest amount of guidance for supporting ELLs within the secondary context at TIS. The first three hypotheses suggest that acquisition has a prominent role in a person's second language performance, and the final two hypotheses begin to address how a person is actually able to acquire language (Krashen, 1981). The fourth hypothesis, the Input Hypothesis, states that people acquire language when they are exposed to language containing structures a small degree more advanced than the person's current language level (Krashen, 1981). In other words, students acquire structure when they are able to understand the language without "focusing on the form of the input or analyzing it," and students are able to do this by taking into account context, extra-linguistic information, and their existing knowledge of the world (Krashen, 1981, p. 58). This suggests teachers achieve the greatest success with their students when they build on their students' linguistic and cultural capital.

As Brooks and Karathanos (2009) explain, teachers must go beyond superficial inclusive instructional strategies in order to provide a supportive classroom environment and “equitable learning opportunities” for all of their students, particularly those who are culturally and linguistically diverse (p. 47). In order to do this, teachers must “embrace culturally responsive pedagogy” and recognize the importance of helping all of their students “make meaningful connections between their existing schema and content area concepts and skills” (Brooks & Karathanos, 2009, p. 47). This sort of culturally and linguistically responsive pedagogy would benefit all students at TIS, particularly those working to acquire English as an additional language.

Liu (2015) argues that the fourth hypothesis is vague in that it does not clearly define what is meant by comprehensible input, and when it specifies that people acquire language when exposed to structures which are slightly more advanced than those at their current level, it does not delineate how to determine what is slightly more advanced. Another criticism is that Krashen (1981) implies one way to make input comprehensible is to simplify it, but Liu (2015) counters that comprehensible is not necessarily equivalent to simpler. Instead, it often means “adjusting teacher speech, modeling academic tasks, and using multimodal techniques to increase comprehension” (Echevarría et al., 2010, p. 18). Application of such strategies did not require a semantic study of what is meant by “comprehensible input”; rather, it focused on a number of teaching methods all secondary teachers could employ in their classes to help support ELLs.

The fifth and final hypothesis is the Affective Filter Hypothesis relates to affective aspects of language acquisition (Krashen, 1981). In particular, it focuses on the affective variables of anxiety, motivation, and self-confidence and how they can

contribute to or detract from a classroom environment conducive to language acquisition (Krashen, 1981). With knowledge and understanding of these affective variables, teachers could employ strategies to help lower students' affective filters so as to create the conditions for improved language acquisition. Jabbarifar (2011) suggests teachers should help students in the process of identifying ambitious, yet feasible, goals which are related to student interests. Then, teachers are better suited to supporting their students as they work towards these goals, which helps increase student motivation in achieving the goals. Overall, it is essential for teachers to determine how to best provide "a non-threatening and supportive instructional environment" which facilitates lowering students' affective filters (Jabbarifar, 2011, p. 123). In this way, teachers create a more appropriate classroom environment to allow for all students, particularly ELLs, to acquire both language and content knowledge.

Taking into account existing research regarding second language acquisition as well as their classroom teaching experience and assessment expertise, a team at Stanford Graduate School of Education spearheaded an initiative with the goal of increasing recognition amongst teachers that learning the language of each academic discipline is essential to students' ability to access content (Stanford Graduate School of Education, n.d.). This team developed six key principles for ELL instruction to guide educators as they developed instruction for ELLs (Understanding Language, n.d.). These key principles supported the content of the PLC meetings. Specifically, the content was adapted from a suite of modules developed by iTeachELLs, a project at the Arizona State University Mary Lou Fulton Teachers College.

Professional Learning Communities

In terms of the innovation, rather than focusing on individual teachers and their efforts to support ELLs, a group of motivated teachers in a PLC built on the collaborative effort and collective capacity of all involved. Within the realm of education, a PLC is a group, or community, of educators who come together to learn by sharing their expertise and working collaboratively to achieve their shared vision (Hall & Hord, 2020).

According to Stoll et al. (2006), change in education is dependent upon the individual and collective capacity of teachers, and PLCs demonstrate potential for the capacity building necessary for sustainable improvement in education. The formation of a PLC focused on supporting ELLs had the potential for change within the school community, but it also had the potential for sustainable improvement.

As Hall and Hord (2020) explain, “The PLC has become widely heralded as the way for professional staff of schools to work for student benefits” as a PLC allows for collaboration that contributes to “a culture in which the staff grows in professionalism and efficacy” (p. 206). Effective PLCs involve six dimensions: shared values and vision; intentional, collective learning and application; supportive and shared leadership; structural conditions; relational conditions; and shared personal practice (Hall & Hord, 2020). By structuring a PLC in a way that consciously takes into account each of the six dimensions, a change facilitator can expect “the intentional learning of the participants and their application of the learning in their classrooms” (Hall & Hord, 2020, p. 210). A true PLC has the potential to benefit both the teachers involved and their students.

Adult Learning Theory

While Second Language Acquisition Theory focuses on the content that was taught in this innovation, Adult Learning Theory focuses on the strategies that were used to teach the adult teacher participants in the PLC. Just as it was helpful to better understand how the students learn language, it was also helpful to better understand how teachers learn to improve their practice to better meet the needs of their students. In the late 1960s, researcher Malcolm Knowles adopted the term andragogy to mean “the art and science of helping adults learn,” which he defined in contrast to the term pedagogy, meaning “the art and science of helping children learn” (Merriam, 2001, p. 5). He went on to distinguish an adult learner from a younger learner with five specific characteristics.

The Five Learner Characteristics. First of all, Adult Learning Theory suggests adult learners have independent self-concepts and the ability to direct their own learning (Merriam, 2004). In terms of their ability to direct their own learning, adult learners within the secondary setting can sometimes be limited to a “one-size fits all” approach to professional development which does not differentiate based on a teacher’s background or experience. Teachers may or may not have a choice as to whether or not they participate in the professional development, and in this sense, they may not be provided with the ability to direct their own learning. Therefore, rather than disregarding this aspect of adult learners, effective professional development acknowledges this aspect and provides adult learners with opportunities to direct their own learning to meet the immediate needs of their students (Darling-Hammond et al., 2009).

In addition, Adult Learning Theory recognizes adult learners as having “a reservoir of life experiences” which in turn provide “a rich resource for learning”

(Merriam, 2004, p. 203). Often times, professional learning at schools follows what Freire (1970) considers the banking concept of education, where teachers are considered to resemble an empty vat needing to be filled with knowledge from some outside source, often an educational consultant with little or no experience in the adult learner's specific context. By seeking knowledge from outside the school's context, such professional learning disregards each teacher's reservoir of life experiences and denies them the opportunity to build on those experiences and apply them towards their professional learning (DuFour, 2004).

Moreover, the third and fourth characteristics suggest that adult learners have "learning needs closely related to changing social roles," and an adult learner is someone who is "problem centered and interested in immediate application of knowledge" (Merriam, 2004, p. 203). As each teacher participant in the PLC was a secondary teacher at the school, they benefited most from meeting content which was focused on their roles at the school. The content was structured in a way which allowed for the immediate application of classroom strategies which helped them address the problem of how to best support all of their students with differentiated instruction. Lastly, Adult Learning Theory defines an adult learner as someone who "is motivated to learn by internal rather than external factors" (Merriam, 2004, p. 203).

Overall, these five learner characteristics are problematic in the sense that adults, specifically teachers, do not always have the option to direct their own learning. Further, they are not always provided with opportunities to immediately apply the knowledge they gain from required professional development. When mandated to attend professional development, teachers may be motivated to learn by internal factors. On the other hand,

they may be motivated by the external requirements of their positions. This project incorporated the five learner characteristics to best support teachers in understanding and applying new knowledge about second language acquisition within their classes.

Context and Situated Cognition. Within Knowles' Adult Learning Theory, there is no acknowledgement of the significance of the context in which the learning takes place. As Merriam (2004) explains, "a person's history, culture, and surrounding social institutions and structures define the nature of the learning transaction" (p. 204). Similar to how it is helpful for students to build on their cultural and linguistic capital in order to facilitate the learning process, it is helpful for teachers to build on their real-life experiences and context in order to facilitate a more meaningful learning process. Adult Learning Theory recognizes that adult learning entails more than cognitive processing; instead, it is a multidimensional phenomenon, and the relatively recent acknowledgement that adult learning takes place in various contexts both enhances understanding of how adults learn and expands thinking as to which instructional strategies are most appropriate and effective to foster adult learning (Merriam, 2008, p. 97).

The concept of situated cognition suggests that "learning is context bound, tool dependent, and socially interactive. The place in which situated cognition occurs is the community of practice, which might be a family, a classroom, a workplace, an online community, a town, or a corporation" (Merriam, 2004, p. 211). In order to empower the secondary teachers at TIS, it was necessary to take into account their context, including the resources available to them, and to create a community of practice in which the teachers could be socially interactive as they learned. In this way, the concepts of adult

learning theory and situated cognition were applied to facilitate meaningful and lasting change within the school community.

Self-Efficacy

One of the intended outcomes of the innovation of the PLC was to increase the self-efficacy of secondary teachers as it related to their ability to support the ELLs in their classes. Albert Bandura (1983) explains, “Perceived self-efficacy is concerned with people's judgments of how well they can organize and execute, constituent cognitive, social, and behavioral skills in dealing with prospective situations” (p. 467). In other words, self-efficacy relates to a person’s confidence in their own abilities and their perceptions of their own abilities to deal with potential situations. If a person has high self-efficacy, then they likely “approach difficult tasks as challenges to be mastered rather than as threats to be avoided” (Xu, 2012, p. 1400). Therefore, if a secondary teacher has a high level of self-efficacy as it relates to their ability to support the ELLs in their classes, then they would likely face this challenge rather than avoid it. In this sense, it was an important measure for this study because the more assurance the teachers felt in their capabilities after their participation in a PLC, the more likely they would be able to meet the challenge of supporting the ELLs in their classes.

Several aspects of PLCs, such as members’ democratic participation in decision making and shared power and authority, helped contribute to a culture of increased efficacy amongst teachers, and such efficacy instills confidence in teachers which persuades them that “each student can learn with the appropriate material and strategies” (Hall & Hord, 2020, p. 206). Accordingly, within the context of this study, an effort towards increased efficacy instilled confidence in teachers which persuaded them that the

ELLs in their classes could learn with the appropriate material and strategies. Because self-efficacy relates to a person's perceptions of their abilities, in this study, self-efficacy was self-reported by the participants and considered one of the measures of the success of the innovation of the PLC. Teachers' personal values are important predictors of their self-efficacy, and teachers' self-efficacy is a relevant factor for the effectiveness of their teaching (Barni et al., 2019). As such, a teacher's improved self-efficacy can result in the improved academic performance of their students (Barni et al., 2019).

Theoretical Alignment

As the purpose of this study was to empower secondary teachers to support the ELLs in their classes, Second Language Acquisition Theory informed the content of the innovation, and Adult Learning Theory informed the methods for implementing the innovation in the form of a PLC. Self-efficacy related to the outcomes of the innovation. Currently, the research demonstrates the importance of comprehensible input and low affective filters for students in the process of acquiring a new language as well as the importance of professional learning for teachers which is situated in their context, immediately applicable, and collaborative. However, no current research specifically addresses how connecting Second Language Acquisition Theory and professional learning opportunities for secondary teachers in international schools can help the teachers better support the ELLs in their classes. This research sought to fill this gap within the situated context of TIS with the implementation of a professional learning community.

CHAPTER 3

METHOD

In order to evaluate ways to empower secondary teachers at TIS to better support the ELLs in their classes, this action research used a mixed methods research design. The innovation was implemented within an international secondary school setting, and the participants in the innovation were teachers and learning assistants (LAs) at the school. As I was a secondary teacher at the school, I served the role of a full researcher-participant. The innovation and data collection took place during the fall semester of the 2022-2023 school year. The innovation entailed both a PLC as well as a digital toolkit of resources, and both quantitative and qualitative measures were collected and analyzed to evaluate the success of these supports. This chapter will articulate the methods and analysis strategy for the study.

Statement of Research Design

The process of action research is cyclical and an “iterative process” which emphasizes, rather than minimizes, the role of subjectivity in the research (Aspers & Corte, 2019, p. 139). In order to address the need to empower secondary teachers with strategies to support ELLs, an action research study was an appropriate method as it was cyclical, rather than terminal, in nature. In many schools in which I have taught, there has been a focus on life-long learning, and as a teacher, this concept resonates with me because I feel it is important for me to model the process of learning for my students. I can be an example, as well as an inspiration, for them. In this way, I am both a teacher and a learner, and action research enabled this with my teacher colleagues as well. Not only does action research enable educators to continue learning and developing, action

research also empowers educators to grow and improve. Action research is adaptive and flexible enough to connect to an educator's overall vision while simultaneously narrowing in on a specific area of growth, in this case, the empowerment of secondary teachers to better meet the needs of the ELLs in their classes.

Setting

The study was set within the context of TIS, an international school in Madagascar encompassing students in kindergarten through grade 12, representing approximately 40 different nationalities. This cycle of research focused on empowering secondary teachers from the middle and high school who worked with students in grades 6 through 12 (serving approximately 170 students). At the time of the study, 28 secondary students received EAL support. These students came from various cultural and linguistic backgrounds and represented a number of different nationalities. However, the majority of these students, 24 of 28, spoke French, which was one of the national languages of Madagascar. The school was founded more than 50 years ago, but in the past few years, there had been a demographic shift with a greater number of students developing English language proficiency. Due to that demographic shift, it was even more essential for teachers to have the knowledge, strategies, and skills to support ELLs.

Participants

There were a total of 35 teachers at TIS, and 21 of these teachers had courses at the secondary level. Before beginning this cycle of research, I met with the school-wide principal and the student services coordinator to discuss whom to invite to participate in the PLC. They encouraged me to invite a combination of teachers who were either new to the school and/or new to the profession, as well as teachers for whom English was not

their native language. They further encouraged me to invite teachers who received support in their classes from LAs. Based on the structure of student support at the secondary level, I also wanted to invite the two LAs who provide additional support to ELLs in a number of secondary classes which were considered language heavy, as this would provide the LAs with additional time to collaborate with some of the teachers of those classes. Although there were a number of professional development opportunities embedded within the school schedule, the PLC took place outside of regular working hours. I intentionally wanted a mix of teachers from different content areas, and since the PLC would be outside of school hours and regular responsibilities, the participants would need to have a certain level of motivation and commitment from the start. I began by inviting seven individuals recommended by the principal and student services coordinator. This initial group included the two LAs. Two of the teachers and both of the LAs opted to participate, which left me with a total of four participants, so I decided to reach out to three other teachers, including one of the secondary EAL support class teachers. All three of these people from the second group agreed to participate, so in the end, there were seven participants: five teachers and two LAs. This group included five individuals who were not native English speakers. It included a design teacher, an EAL teacher, a theory of knowledge teacher, a science teacher, and a social studies teacher. Three of the participants taught IBDP courses. Their participation in this group was not mandatory. Rather, their choice to participate indicated an interest in the group as a source of support and a chance to expand their practice while collaborating with a group of like-minded colleagues.

Role of the Researcher

Throughout this cycle of research, I was a full participant in the sense that “A full participant is simultaneously a fully functioning member of the ‘community’ as well as a researcher” (Mertler, 2020, p. 97). At the time of the study, I was a secondary teacher at the school, and as a full participant in the research, I facilitated the PLC, participated in the PLC, and observed the PLC. All three meetings of the PLC focused on ELLs, and I also created a digital toolkit of resources for all secondary teachers primarily based on the content covered in the PLC. Before the first meeting of the PLC, I conducted a survey and semi-structured interview of all of the members of the PLC, and after the completion of the PLC sessions, I conducted post-innovation surveys and interviews in order to compare the pre- and post-innovation data. The innovation, both the PLC and the digital toolkit of resources, were intended to empower teachers by increasing their self-efficacy as well as their knowledge and understanding of differentiated instruction to support all students, particularly ELLs.

Timeline and Procedures

This study took place from September to December in the first semester of the 2022-2023 school year. I finalized the participants in the study on Wednesday, September 7. I recruited the group of seven participants by sending a consent form explaining the study via school email. For those that chose to participate, I conducted the pre-innovation surveys and interviews within the following two weeks and completed them before the first meeting on Wednesday, September 21. The interviews took place via Zoom, and at the start of each interview, I shared the survey via Google Form with each participant to complete. This ensured each participant’s completion of the survey, and by completing

the survey at the same time as the interview (prior to any aspect of the innovation), the survey data provided a true baseline of each participant's current understanding of how to support the ELLs in their classes.

The first meeting of the PLC took place on Wednesday, September 21. Each PLC meeting was approximately one hour in length, and they all took place in person in a general meeting room on the school campus. Shortly after the first meeting, I shared the digital toolkit with the participants through a specific Google Classroom I developed in which they were all considered "students." After the first meeting, there were approximately three weeks of instructional time before the second meeting, which took place on Wednesday, October 19. Following the second meeting, there were approximately four weeks of instructional time before the third and final meeting, which occurred on Wednesday, November 16.

After the three meetings, I conducted the post-innovation interviews virtually through Zoom, and at the start of each interview, I had the participant complete the post-innovation survey on a Google Form. This method facilitated full participation on the survey by all members of the group. These post-innovation interviews and surveys were completed by Wednesday, November 30, which was within two weeks of the final meeting and almost three weeks before December break. In this way, there was no interference with any of the end-of-semester activities, such as reporting. Table 1 shows the timeline of the study.

Table 1*Timeline of Study*

Timeframe	Action	Procedures
By September 7	Finalized participants	Informed participants and shared recruitment methods via email
By September 21	Conducted pre-innovation surveys and interviews	Conducted interviews via Zoom and shared each survey via Google Forms at start of interview
By September 21	Facilitated PLC meeting #1	Shared agenda at start of meeting and facilitated meeting in-person
By October 19	Facilitated PLC meeting #2	Shared agenda at start of meeting and facilitated meeting in-person
By November 16	Facilitated PLC meeting #3	Shared agenda at start of meeting and facilitated meeting in-person
By November 30	Conducted post-innovation interviews and surveys	Conducted interviews via Zoom and shared each survey via Google Forms at start of interview

Innovation

In an effort to lead change at TIS, I implemented an innovation using a digital toolkit and PLC. The innovation provided information and strategies, and developed teachers' skills regarding the instruction of ELLs at the secondary level.

The digital toolkit was available to all participants in Google Classroom, and the content of the digital toolkit closely aligned with the content covered at each PLC meeting (see Appendix E). The toolkit was also briefly reviewed during the PLCs, so that the participants were aware of the resources in the toolkit and how to use them. After the first PLC meeting, I invited them to join the Google Classroom as students. Within the digital toolkit on Google Classroom, there were resources related to second language

acquisition as well as resources specifically related to instructional strategies to support ELLs. The materials were organized by meeting, and there were also related articles shared by one of the participants.

I began the first PLC meeting by developing shared values and vision amongst the participants. There was an emphasis on the function of the PLC as a source of support, and from the start, as the facilitator, I guided the participants by being transparent about the purpose of the group and acknowledging potential obstacles. Then, as a collaborative, we identified how we hoped to benefit from the professional learning and some of the small steps we could take to achieve our vision of supporting ELLs. The second meeting focused on disciplinary discourse. At the second meeting, we covered the components of, and dispositions associated with, disciplinary discourse; how to present content while utilizing language enhancements and building upon students' prior knowledge; and how to identify opportunities where real-life situations could be incorporated into lessons. Finally, the primary topic of the third meeting was assessment. In particular, we reviewed the importance of performing regular formative assessments for content and knowledge; how to use different formative assessments for reading, writing, and oral language; and how to identify ways to use assessments to differentiate learning. We did not have time for the intended content of the third meeting which was to concentrate on metalinguistic strategies, or strategies to create opportunities for students to speak about language. Each meeting was conducted in person in a general meeting room on campus, and each meeting lasted approximately one hour. Table 2 describes an overview of each meeting.

Table 2

Overview of Content for PLC Meetings

Meeting	Topic	Details
First Meeting	Introduction	<ul style="list-style-type: none">• Developed shared values and vision• Identified purpose of group and acknowledged potential obstacles• Identified intended benefits
Second Meeting	Disciplinary Discourse	<ul style="list-style-type: none">• Components of, and dispositions associated with, disciplinary discourse• How to present content while utilizing language enhancements and building upon students' prior knowledge• How to identify opportunities where real-life situations can be incorporated into lessons
Third Meeting	Assessment	<ul style="list-style-type: none">• The importance of performing regular formative assessments for content and knowledge• How to use different formative assessments for reading, writing, and oral language• How to identify ways to use assessments to differentiate learning

Measures

In order to measure the effects of the innovation, this action research project included a mixed-methods approach to the problem with both quantitative and qualitative data sources. The quantitative data collection consisted of a pre- and post-innovation survey, which was taken by the teachers and LAs participating in the PLC. The pre-innovation survey had 15 total questions, and the questions related to three constructs: the participants' confidence in supporting ELLs, their perceptions of their ability to differentiate instruction, and the content of the PLC meetings (see Appendix A). There were three questions for each of the first two constructs, and there were three questions

specific to the intended topic for each of the meetings: disciplinary discourse, assessment, and metalinguistic strategies. Each question utilized a six-point Likert scale: strongly agree (6), agree (5), somewhat agree (4), somewhat disagree (3), disagree (2), and strongly disagree (1). The post-innovation survey had the same 15 questions regarding the same three constructs as the pre-innovation survey. In addition, there was one question asking the participants to select the most useful of the three PLC meetings, and one question asking the participants to select the most useful of the three topics of the PLC meetings. There were also two questions related to the construct of social validity, specifically, the overall social validity of the PLC (see Appendix B). With the exception of the two questions requiring participants to select the most useful meeting and the most useful topic, all of the questions utilized a six-point Likert scale. The pre- and post-innovation surveys were administered on the computer using Google Forms so the results were able to be tracked and compared. Each survey took no more than about 10 minutes of the participant's time.

The qualitative data source for the study entailed the semistructured interviews of the participating teachers. A semi-structured format allowed for an interview that was both "planned and flexible" and served the purpose of obtaining each participant's descriptions of their experience supporting ELLs (Brinkmann & Kvale, 2015, p. 367). This qualitative aspect of the research employed a phenomenological approach in the sense that there was an interest in understanding the topic from the perspective of the participants "with the assumption that the important reality is what people perceive it to be" (Brinkmann & Kvale, 2015, p. 30). The combination of the quantitative and qualitative data collection techniques allowed for overarching themes to emerge while

also allowing for individual perspectives to be heard. In particular, the narrative aspect of qualitative data was appealing as it captured the story-arc of the learning taking place.

The pre-innovation interview questions related to three constructs--self-efficacy, differentiation, and social validity--and there were three questions related to the first two constructs as well as two questions related to the third construct (see Appendix C). In the post-innovation interview, there were two questions per construct for a total of six questions (see Appendix D). Each interview took no more than about 20 minutes.

Triangulation between quantitative and qualitative data sources allowed for a more complete understanding of teacher learning and growth as a result of the innovation.

Analysis Strategy

One of the significant benefits of the survey as a quantitative data source was the ability to statistically analyze the information generated. The independent variable was participation in the PLC. There were three dependent variables: self-efficacy, teachers' implementation of differentiated instruction, and social validity. Because the survey questions entailed a six-point Likert scale, each construct was numerical. For self-efficacy and differentiated instruction, I created a composite of the three related questions for each by taking an average of the three, and then I ran a paired samples t-test to compare the pre- and post-innovation composites and determine whether or not there was a significant difference in participants' self-efficacy and/or their utilization of differentiation methods from before to after the innovation. I followed a similar process with the nine total questions aligned with the intended topics for each of the PLC meetings: disciplinary discourse, assessment, and metalinguistic strategies. I calculated a composite for each topic and ran a paired samples t-test to compare the pre- and post-

innovation composites and determined growth. While these were the intended topics for the meetings, in the end, I did not have the opportunity to review the content related to metalinguistic strategies with the participants because we spent the entire first meeting on more introductory concepts. The three questions related to metalinguistic strategies were still completed on the post-innovation survey to see if it might be informative. In terms of the overall social validity of the PLC, there were only survey questions related to this construct on the post-innovation survey, so descriptive statistics were used as the method for analysis.

Regarding the qualitative data analysis of the interview transcripts, I followed the eight-step process put forth by Schreier (2014). To begin, I built a basic coding frame aligned to my research questions. After developing this basic coding frame, I worked on segmentation and tried out the frame I developed on two of the pre-innovation and two of the post-innovation interview transcripts. Similarly, I had another person double-code the same two pre-innovation and two post-innovation interviews. Following this pilot phase, I met with the other coder to discuss the coding frame and develop subcategories based on emerging themes. After this meeting, I developed a more comprehensive coding frame, which I then shared with the other coder for feedback before proceeding with the main analysis. The second coder reviewed the modified coding frame to ensure it was an accurate representation of our discussion before I proceeded with the main analysis. I ensured that the definitions of the codes were “clear and straightforward” and that the codes, themselves, were “mutually exclusive” (Schreier, 2014, p. 13). I also ensured that the codes “adequately describe the material and the concepts that are part of the research question” (Schreier, 2014, p. 13). During the main analysis phase, I remained open to

additional themes which emerged naturally as I coded all of the interview transcripts using the revised coding frame.

In the final synthesis, information from both the quantitative and the qualitative data (in relation to one another) was integrated to reflect on findings as they related to the research questions.

CHAPTER 4

ANALYSIS AND RESULTS

The purpose of this action research project was to empower secondary teachers to support the ELLs in their classes, using a PLC and digital toolkit. Both quantitative and qualitative measures were used to explore the research questions. The quantitative data included information from the pre- and post-innovation surveys and was analyzed using the Statistical Package for Social Science (SPSS) Version 27 software to calculate descriptive and inferential statistics. The qualitative data included information from the pre- and post-innovation interviews, and it was analyzed using HyperRESEARCH software to code the interview transcripts and calculate the code frequency. Both the quantitative and qualitative results are summarized in this chapter and organized based on their relevance to each of the research questions.

RQ 1a: Self-Efficacy

The first research question related to teachers' self-efficacy regarding their ability to support the ELLs in their classes: How and to what extent did participation in a PLC affect secondary teachers' self-efficacy in supporting ELLs in their classes? The pre- and post-innovation surveys were self-reported, allowing the participants to individually choose the most appropriate response to each question, and the pre-innovation survey established a baseline for how confident the teachers felt before participating in the PLC (see Appendix A). The post-innovation survey, administered approximately eight weeks later, required teachers to respond to the same three questions related to self-efficacy after their participation in the PLC (see Appendix B). For this research question, I created a composite of the three related questions on the survey by taking an average of the three,

and then I ran a two-tailed paired samples t-test to compare the pre- and post-innovation composites and determine whether or not there was a significant difference in participants' self-efficacy (see Table 3). A cutoff of $\alpha = .05$ was used to determine significance for all tests.

Table 3

Paired Samples t-Tests for Pre- and Post-Innovation Surveys

Construct	Pre-Innovation	Post-Innovation	Significance
Self-Efficacy	4.05 (.97)	4.62 (.41)	.17
Differentiation	4.43 (.83)	4.67 (.43)	.45
Disciplinary Discourse	3.82 (.59)	4.68 (.37)	.02
Assessment	4.29 (1.03)	4.91 (.34)	.16
Metalinguistic Strategies	3.29 (1.04)	4.33 (.88)	.04

As shown in Table 3, there was no difference between the pre- and post-innovation survey means on the self-efficacy construct, which suggests that on average, the teachers did not improve their confidence in supporting ELLs in their classes after their participation in the innovation ($t(6) = -1.55, p = .17$).

In terms of the qualitative data, the codes related to self-efficacy were separated into two groups: factors which prohibited self-efficacy and factors which benefitted self-efficacy (see Table 4). Each of the five prohibitive factors had a corresponding beneficial factor except for time because no participant mentioned having sufficient time as a source of confidence in their ability to support ELLs in their classes. When comparing the frequency of the codes for limitations and the frequency of the codes for benefits, there

were 61 instances of limitations and 38 instances of benefits. This meant that in the qualitative data related to self-efficacy, the participants generally focused more of their attention on limitations than on benefits. Within the table, the limitations are organized from highest to lowest frequency, as are the benefits.

Table 4

Coding Frame for Self-Efficacy

Code	Code Definition	Frequency
Limited Practice	When teachers have limited practice or are out of practice in their content area, supporting ELLs, etc.	29
Limited Resources	When teachers have limited teaching resources for supporting the ELLs in their classes	14
Limited Time	When teachers have limited time to plan or prepare to support the ELLs in their classes	8
Limited Language Skills	When teachers have limited ability to communicate with their students due to lack of a common language	7
Limited Knowledge of Students	When teachers have limited knowledge of their students, their students' culture, etc.	3
Sufficient Resources	When teachers have sufficient teaching resources for supporting the ELLs in their classes	14
Sufficient Language Skills	When teachers have sufficient ability to communicate with their students due to the teacher's personal language skills	11
Sufficient Knowledge of Students	When teachers have sufficient knowledge of their students, their students' culture, etc.	9
Sufficient Practice	When teachers have sufficient practice in their content area, supporting ELLs, etc.	4

Practice. The most significant theme which emerged regarding factors which inhibited self-efficacy was that teachers felt limited in their practice, either because they had limited experience working with ELLs or they had limited experience in a particular content area. As one participant observed, “So this is the first time that . . . I’m really having experience with supporting ELL students and having those ELL students in my class.” More than 16% of secondary students at the school receive EAL support. Not all participants were accustomed to working with so many students developing English language proficiency. As another participant explained, their most recent experience had been at the IBDP level: “so the level of support hasn’t been very high, or it hasn’t needed to be very high until coming here.” The IBDP curriculum required a certain level of academic proficiency in language from the students, so teachers whose previous experience was focused on the IBDP level were used to students in their classes who were more proficient in English.

In addition to limited practice working with ELLs, several participants mentioned limited practice in their particular content area as another challenge. One participant described arriving at the school and being assigned to teach a course in social science in which they had no previous experience. Another participant, new to the school this year, explained, “some of what I’m teaching right now I’ve not taught before, so I’m trying to learn it faster and then find all the resources that I need at all the different levels.” Here, the participant emphasized the difficulty of trying to balance learning the content themselves with locating the necessary resources to ensure all of their students could access the content. This required the participants to view themselves as both content area teachers and language teachers, which was not always acknowledged by the teachers. For

example, when asked about their current confidence level with the students in their classes, one participant responded, “It does not make me feel like a very good teacher, because yeah, it's hard. It's, it's really hard to do. I feel as a science teacher, this is not my expertise.” The shift to viewing oneself as a content area teacher and a language teacher requires practice and time, and both of these factors appeared to be limited for the participants.

Resources and Time. Limitations of resources and time appeared prevalent, particularly in the pre-innovation interviews. As one participant discussed, “I'm kind of, like, limited when it comes to time and, and my resources as well.” The same participant went on to describe that “the resources are just, like, completely lacking,” in contrast to a previous teaching context in which they felt more confident due to sufficient resources: “It was great because I felt like I had sufficient resources to always at least maintain sort of a minimum standard of support, and that I, I could build off of that and get more creative.” In some cases, such as this one, the participants felt they had a sense of what they should be doing, but they did not feel they had the time to do it. For instance, one participant stated, “I know that there's a couple of things that I should be doing that I'm not doing because I don't have time for it.” Even in the post-innovation interview, this same participant struggled with the time factor: “It's just that I don't have enough time to develop those resources or tools.” In some of the other post-innovation interviews, participants mentioned now having access to a few more resources and strategies, which increased their self-efficacy. One participant observed, “The more strategies, the more, uh, powerful you are,” and another stated that they now felt “more informed.” Moreover, they continued, “I feel like I know where to go and where to look to kind of find

strategies and to kind of prioritize, um, which is really good, because before, I really just had no idea.” Some of those specific strategies and resources for differentiation for ELLs will be discussed in relation to the next research question.

Knowledge of Students and Language Skills. The other two factors related to self-efficacy were participants’ knowledge of students and participants’ personal language skills. When asked about their self-efficacy, one participant described why they felt more confident this school year than last: “I know most of them from last year, and how they teach, how they learn. I’m able to kind of be faster supporting them.” This was in contrast to how the participant felt last year with many of the same students: “Last year, I was more like, ‘Hm. How does this student learn? How does this other student learn? What should I do now?’” This knowledge of students allowed the participant to feel “more efficient at helping them in a lesser, in a lesser amount of time.” In addition to a familiarity with the students, the ability to communicate with students in a common language often led to increased confidence.

Within the context of the school, 24 of the 28 secondary students who receive EAL support spoke French. Likewise, four of the seven participants in the PLC spoke fluent French, and a fifth participant had some proficiency in the French language. This enabled the participants to use French when needed with many students. However, as one participant pointed out, they were really struggling to communicate with ELLs who did not speak French “because there is no kind of buffer language, and they are so isolated in the current context.” Another participant shared the same dilemma, citing that using French only works for some students, not all. When participants lacked knowledge of

their students or an ability to communicate with those students through another language, the participants felt far less efficacious in their ability to support those students.

Changes in Self-Efficacy after the Innovation. Overall, both the quantitative and qualitative data demonstrate little change in the participants' self-efficacy from before their participation in the PLC to after their participation. In the pre-innovation interviews, participants spent more time explaining their current teaching context and their experiences at the school. For at least two of the participants, this included teaching new content after they arrived at the school. However, in the post-innovation interviews, the concept of limited practice was not mentioned as frequently. Instead, in the post-innovation interviews, there were more mentions of sufficient resources to support ELLs within the current context, and some of the resources the participants mentioned came in the form of strategies to differentiate instruction for ELLs.

RQ 1b: Differentiated Instruction

The next research question related to teachers' use of differentiated instruction to support the ELLs in their classes: How and to what extent did participation in a PLC affect secondary teachers' reports of the implementation of differentiated instruction for ELLs in their classes? As demonstrated in the question, the data was based on teachers' reports of implementation in their classes. Similar to the first research question, participants were able to individually choose the most appropriate response to each related survey question, and the pre-innovation survey established a baseline for four different measures related to differentiated instruction. First, there were three questions where the participants self-reported their implementation of differentiated instruction. Then, there were three questions specific to each of the intended topics for the meetings:

disciplinary discourse, assessment, and metalinguistic strategies (see Appendix A). The post-innovation survey, administered approximately eight weeks later, required teachers to respond to the same three questions related to differentiated instruction and about use of the three strategies after their participation in the PLC (see Appendix B). Just as with the first research question, a composite was created from the three related questions on the survey by taking an average of the three, and then a two-tailed paired samples t-test was used to compare the pre- and post-innovation composites and determine whether or not there was a significant difference (see Table 3).

As shown in Table 3, there was no difference between the pre- and post-innovation survey means in terms of participants' self-reports of using differentiated instruction, which signifies that on average, the participants implemented differentiated instruction in their classes at about the same level both before ($M = 4.43$, $SD = .83$) and after ($M = 4.67$, $SD = .43$) their participation in the PLC ($t(6) = -.80$, $p = .45$). Similarly, in terms of their understanding of assessment of ELLs, there was no difference between the pre- and post-innovation survey means, which signifies that on average, the participants felt they had the same levels of knowledge and understanding of assessing ELLs both before ($M=4.29$, $SD=1.03$) and after ($M=4.91$, $SD=.34$) the PLC ($t(6) = -1.60$, $p = .16$). However, for two of the three strategies, there was a significant change. The second of the three PLC meetings focused on disciplinary discourse, and there was a significant change in the participants' self-reported knowledge and understanding of disciplinary discourse from the pre- ($M = 3.82$, $SD = .59$) to post-intervention survey ($M = 4.68$, $SD = .37$; $t(6) = -3.15$, $p = .02$). The third intended PLC meeting topic was metalinguistic strategies. Despite the fact that this content was not covered due to a lack

of time, the pre- ($M = 3.29$, $SD = 1.04$) to post-innovation ($M = 4.33$, $SD = .88$) surveys demonstrated a significant increase in the participants' knowledge and understanding of metalinguistic strategies ($t(6) = -2.70$, $p = .04$).

In terms of the qualitative data, the codes related to differentiated instruction each identified a different way in which teachers were able to differentiate their instruction for the students in their classes (see Table 5). In the interviews, teachers were asked about the ways they differentiate in general as well as the ways they differentiate specifically for ELLs (see Appendices C and D). In addition, there was a code for time differentiation. This was defined as “when differentiation was related to providing certain students with additional time.” This was separate and unique in definition from the codes related to “limited time” (self-efficacy) and “time social validity” (social validity). Within the table, the codes are organized from highest to lowest frequency.

Table 5

Coding Frame for Differentiated Instruction

Code	Code Definition	Frequency
Assessment	When teachers differentiate the assessment	22
Readings	When teachers utilize readings at different levels and/or in different languages	19
Vocabulary	When differentiation methods relate to content area vocabulary	19
Time Differentiation	When differentiation is related to providing certain students with additional time	12
Visual Aids	When teachers utilize visual aids in the classroom	12
Flexible Grouping	When teachers intentionally group certain students as a means of differentiation	11

Graphic Organizers	When teachers utilize graphic organizers	10
Student Choice	When teachers allow for student choice in the classroom to differentiate	10
Exemplars	When teachers share exemplars from previous students with their current students	7
Individual Meetings	When teachers have individual meetings or check-ins with particular students	7
Sentence Frames	When teachers provide sentence frames and/or sentence starters for students	7
Technology	When teachers utilize technology in the classroom to differentiate	7
Translanguaging	When teachers utilize more than one language within a classroom lesson	6

Assessment, Time Differentiation, and Student Choice. A common theme which emerged from the interviews, both pre- and post-innovation, was the idea of assessment. Moreover, the topic of the third and final PLC meeting was assessment. In particular, at the third meeting, the goals included reviewing the following concepts: the importance of performing regular formative assessments for content and knowledge; how to use different formative assessments for reading, writing, and oral language; and how to identify ways to use assessments to differentiate learning (see Table 2). Within the local context, secondary students received grades based only on their summative assessments. According to the school assessment policy, summative assessments were used to evaluate student learning at the conclusion of a defined instructional period by comparing against an established rubric. Although formative assessments were also completed by the students, formative assessments were meant as tasks and tools teachers used to assess

ongoing student work and understanding. Formative assessments could be used by teachers to improve teaching and by students to improve learning.

In general, when a participant referred to assessment in the interviews, they were addressing specific ways in which they differentiated the assessment, whether summative or formative, for particular students. Oftentimes, they would allow for time differentiation in which they would provide the assessment questions to the students ahead of time. As one participant explained, “I am going to give him the questions in advance so that he can translate them, . . . and he is aware of what is going to be coming.” Particularly in the pre-innovation interviews, this participant often focused on time differentiation and providing the assessment prompts in advance. Another common method of time differentiation mentioned in the pre-innovation interviews related to providing additional time on assessments to students with identified learning differences and students who receive EAL support.

At the PLC meeting focused on assessment, the participants had the opportunity to bring in student writing samples from their classes. They were then provided with a tool to assess the writing sample in terms of language rather than in terms of content. I modeled this process for them with a student writing sample from one of my own classes. Next, they had the chance to work through the same process with partners using their own student writing samples. One participant commented how it was “interesting and insightful to look at a text, well, a piece of a student work, um, with somebody else.” When discussing the PLC meetings at the post-innovation interview, another participant stated:

I feel like we talked about a lot of just strategies I could try, um, especially, uh, with assessment. I feel like now I have a tool, whereas before I was really not using any tool. Um, so I know kind of, um, I, I have some ideas of strategy that I could try.

Even in the pre-innovation interviews, a couple of the participants identified ways that they already differentiated assessments by allowing for student choice. As one participant reflected, “I always build in choice in a lot of the projects, so that, that part always lends to differentiation, whether it's product or, ah, content.” The participant then provided an example: “I'll let them choose if they want to do a social, economic, or political effect to research.” Similarly, in the pre-innovation interview, another participant provided student choice as an example of how they differentiated assessment in their classes: “I give students often the choice, uh, on how they want to demonstrate their learning,” and just as with the other participant, this participant provided specific examples: “so sometimes this could be . . . maybe they want to write an essay, but maybe they also want to do something more with, like, drawings or make a video on something.” In general, in both the pre- and post-innovation interviews as well as at the third PLC meeting, assessment and ways to differentiate assessment, such as through time and student choice, were common themes.

Readings, Vocabulary, and Visual Aids. Another theme which emerged in the interviews was the idea of differentiating for students by utilizing readings at different levels and/or in different languages as well as focusing on content area vocabulary as a means of supporting students with developing English language proficiency. In their pre-innovation interview, one participant described how “when I have, ah, more diverse

learners, then I bring in more, like, graphic organizers that are either, like, required or optional, depending on kids' different readings." This participant, a social studies teacher, focused on the importance of providing different students with different readings: "For example, today I had, um, the ELL students read a Khan Academy article, and then I had the other students reading a more high-level text." Their differentiation methods entailed both differentiated readings as well as flexible grouping: "Then, I'm going to pair them up, and they're going to write a letter together." In content areas which are considered language heavy within the local context, such as social studies, the technique of providing readings at different levels and/or in different languages seemed to be a focus, particularly in the pre-innovation interviews. This same teacher described the challenge this presented for them:

When I create a lesson on something, I feel like I have to find three different levels of text for the same, um, content--whatever I'm trying to cover--and it can be kind of overwhelming to try to find what I need.

This feeling of pressure to differentiate to meet the needs of the students seemed clear in both the pre- and post-innovation interviews.

In addition to the differentiated readings, vocabulary was also mentioned frequently in both the pre- and post-innovation interviews. Moreover, the topic of the second PLC meeting was disciplinary discourse, or the way people within a particular discipline discuss the content. Although there is a clear distinction between vocabulary and disciplinary discourse, the two are still closely related. One of the participants who was an LA at the school detailed some of the difficulties she faced related to content area vocabulary: "Science, for example, is one that I have a lot of challenges with, just

because of the terms.” Certain content areas, such as science, may not be considered “language heavy” in terms of the amount of reading required, yet they can still have rigorous demands of students in the form of discipline-specific vocabulary. In these situations, visual aids may be helpful. One participant referred to the importance of providing students with “access to translation tools,” and if the students cannot access the language in any other way, then “using pictures or using mind maps, so a lot more visual.” Overall, there was a focus, especially in the pre-innovation interviews, on the importance of “giving them the words they need” in order to both access the content and engage in discourse regarding the content.

Changes in Differentiation after the Innovation. Before the PLC meetings, the way the participants spoke about differentiation varied greatly. The different participants each seemed to have their own understanding of the term, and the term brought to mind different strategies for each of them. Whereas a couple of participants focused on student choice as a means of differentiation in the pre-innovation interviews, many mentioned time differentiation as one of the main strategies they employed for ELLs. However, after their participation in the PLC meetings, particularly as demonstrated through the qualitative data, there was more common language related to differentiation and a wider variety of strategies discussed, demonstrating the participants’ more complex understanding of differentiated instruction. Some strategies, such as exemplars of work from previous students and sentence frames, were specifically addressed at the PLC meetings and then referred to in the post-innovation interviews. In fact, this presence of a broad range of classroom strategies embedded within the content of the PLC meetings contributed as a source of social validity for the innovation.

RQ 2: Social Validity

The final research question related to teachers' perceptions regarding the social validity of the innovation: How and to what extent did secondary teachers perceive the effectiveness and usefulness of a PLC? Similar to the other research questions, participants were able to individually choose the most appropriate response to each related survey question. However, for this particular research question, there were a total of four related survey questions, and those questions were only on the post-innovation survey (see Appendix B). Therefore, each of the four questions was first reviewed separately. Then, a composite was created using the two related likert-type questions, which were analyzed using descriptive statistics.

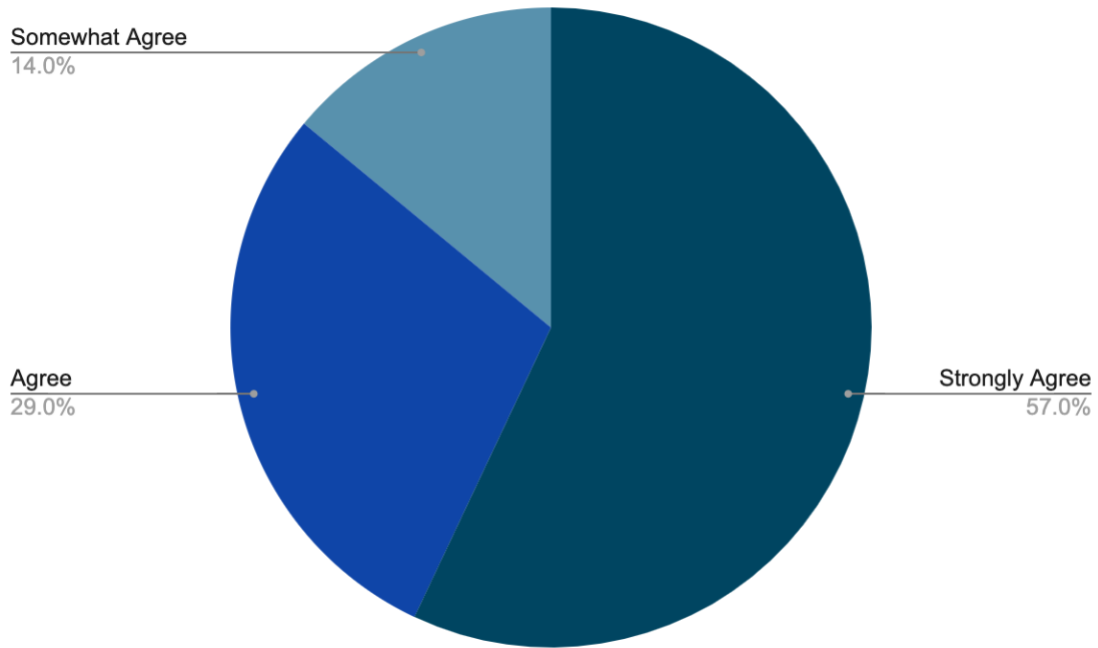
The first two questions related to social validity on the post-innovation survey were specific to the content of each of the three meetings. One question asked which of the three meetings the participants found most useful, and the other question asked which of the three topics they found most useful. The first meeting was more of an introduction, and the second and third meetings focused on disciplinary discourse and assessment, respectively. In sum, four of the participants found the third meeting and the topic of assessment most useful, whereas three of the participants found the second meeting and the topic of disciplinary discourse most useful.

For the two questions which employed a Likert scale, the scale was as follows: strongly agree (6), agree (5), somewhat agree (4), somewhat disagree (3), disagree (2), and strongly disagree (1). The first related question on the survey asked participants to rate the following statement: The PLC meetings were an effective way to share the information regarding how to support ELLs. For this particular question, four participants

strongly agreed, two participants agreed, and one participant somewhat agreed (see Figure 1).

Figure 1

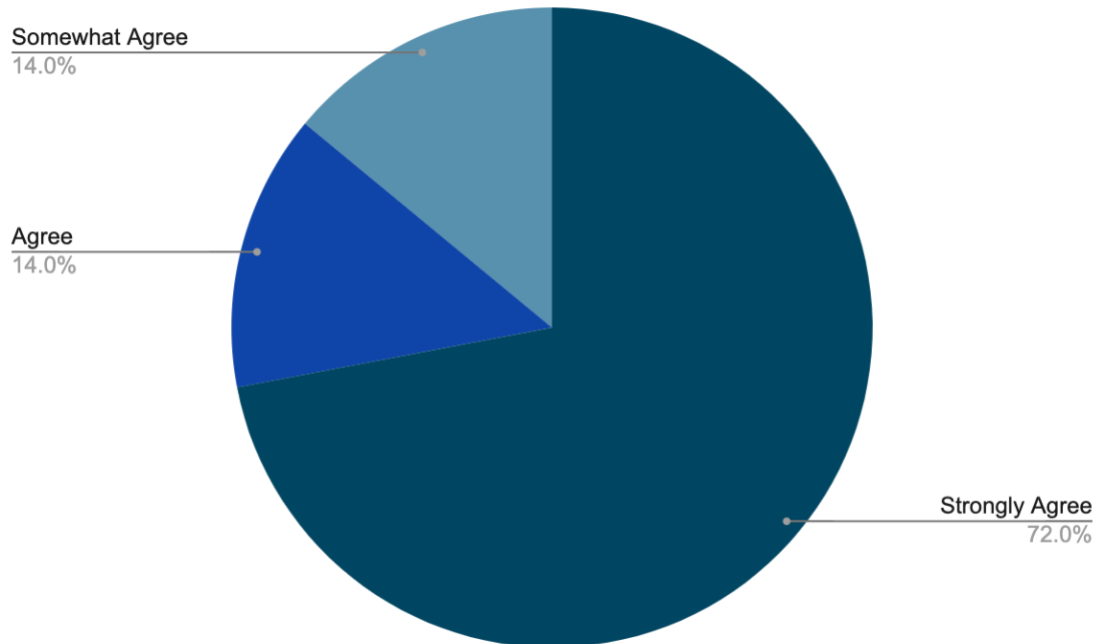
Effectiveness of PLC Meetings



The second related question on the survey asked participants to rate this statement: The content of the PLC meetings was useful in terms of ways to support ELLs. For this question, five participants strongly agreed, one participant agreed, and one participant somewhat agreed (see Figure 2).

Figure 2

Usefulness of PLC Meetings



In terms of the composite, the mean response on the Likert scale was 5.50, which is between agree and strongly agree. This signifies that, on average, the participants agreed that the PLC was socially valid.

In terms of the qualitative data, the codes related to social validity all identified different aspects of professional learning, or professional development, in which the teachers engaged (see Table 6). In the pre-innovation interviews, teachers were asked about their past experiences with PLCs as well as how they felt about participating in this particular PLC (see Appendix C). Afterwards, in the post-innovation interviews, teachers were asked to explain which meeting they found most useful and what they found to be the strengths and areas for improvement with the PLC format (see Appendix D). Time continued to be a theme in relation to this research question, so there was a specific code

utilized to indicate time associated with social validity. This is defined as “when teachers address time spent within professional learning.” This is separate and unique in definition from the codes related to “limited time” (self-efficacy) and “time differentiation” (differentiated instruction). Within the table, the codes are organized from highest to lowest frequency.

Table 6

Coding Frame for Social Validity

Code	Code Definition	Frequency
Relevance	When professional learning is relevant for teachers' current circumstances	33
Growth Mindset	When teachers have a growth mindset towards professional learning	27
Time Social Validity	When teachers address time spent in professional learning	19
Collaboration	When teachers have the opportunity to collaborate with one another through professional learning	17
Collegial Support	When teachers no longer feel as isolated as a result of professional learning	12
Practice	When professional learning is focused on practice rather than theory	10
Informal Format	When professional learning takes place in an informal setting, such as on social media	6
Activation of Prior Knowledge	When professional learning reminds teachers of methods they have heard about or used previously	5
Student Work	When professional learning incorporates opportunities to review student work	3

Relevance. Relevance emerged as the primary contributing factor of social validity. This related to professional learning opportunities, in general, in addition to this specific professional learning opportunity with the PLC focused on ELLs. The relevance of this particular PLC for the participants was apparent even in the pre-innovation interviews. As one participant stated, “It’s needed right now. You know, I have the kids that I feel like I’m not doing justice for them.” This immediate relevance was also true for other participants: “I just feel like it’s exactly what I need, especially just because I feel kind of at a loss right now with my situation.” Both of these participants emphasized the relevance of the PLC for their classes at the moment and the desire they had to meet the needs of their students. However, they did not feel this way about every professional development opportunity they had attended in the past. As one participant delineated, “People feel like it’s a waste of their time, you know, if it’s forced on them.” On the contrary, a different participant observed, “The most helpful, of course, is when I can take something that is going to benefit my students.” This PLC was specifically structured for teachers and LAs at this school working with these students, and the relevance was clear to all, even in the pre-innovation interviews: “I think it’s right in my, my domain and right where I’m at in my job.”

After the intervention, the participants confirmed the relevance of the content of the PLC in their post-innovation interviews. One participant mentioned, “I thought there were some good strategies shared and some things that I changed, you know, just in that time period.” Another participant found it beneficial as well because “it included more strategies like for the day to day,” and yet another stated, “I was able to apply right away actually after some of the meetings.” In particular, a couple of participants cited a

discussion from the third PLC meeting, the one focused on assessment. At that meeting, the scoring for the WIDA assessment was clarified, which is the English proficiency test used for admissions of new students as well as for progress monitoring of ELLs.

Although all participants had access to the WIDA assessment scores for all ELLs at the school, the participants did not know how the assessment worked or what the scores meant. One participant recalled, “I think my favorite part was understanding how the, the testing is done, like, for, for placement for students.” Even though the discussion about WIDA did not comprise a significant portion of the content for the third meeting, another participant said, “but just that little understanding of which I think that is just so useful for any, any teacher around the school.”

Growth Mindset. Particularly in the pre-innovation interviews, the participants’ growth mindset, meaning the participants’ openness to new ideas and continued professional learning and development, was clear, and approaching the PLC with a growth mindset proved a critical element for them to achieve the gains they made. As one participant clarified, “You can always develop new things, and you can always learn from the, from other teachers, like whether you’re like a new teacher or you’ve been in the profession for like forty years.” From the onset, the outlook towards the PLC was positive, and the participants seemed to be approaching it as a potentially valuable opportunity: “I really need to like improve myself, and I know there’s going to be always a new thing for me, because I, I’m not 100% sure that I know everything.” Another participant observed, “I feel good because it’s a topic I’m actually interested in, because I, it’s been a problem and a challenge, you know, and so I feel like I can really learn from this.” Finally, one participant summed up the generally growth-oriented attitude of them

all: “I’ve always been taught that teachers always learn, and I try to do that as best I can.” One of the key aspects which seemed to contribute to the social validity of the PLC format was the growth mindset the participants exhibited even before their participation in the innovation.

Collaboration and Collegial Support. Although alluded to in the pre-innovation interviews, the opportunity to collaborate with their colleagues was discussed as one of the most valuable benefits of their participation in the PLC in the post-innovation interviews. The group consisted of seven participants, including five teachers and two LAs, representing a variety of different content areas, backgrounds, and professional experience. As one of them pointed out, “It was very, very, as I said, very nice to connect with other teachers and to . . . share ideas and opinions and then frustrations.” This also corresponds to a related theme of collegial support which emerged in the post-innovation interviews. One participant described, “I felt that it was a, like, a safe environment” in the PLC meetings, and in that safe environment, the participant realized, “It’s not just me.” In other words, the sense of isolation was diminished as a result of the PLCs. Another participant repeated the exact same statement: “It’s not just me.” The PLC provided participants with the opportunity to connect with one another and share their experiences, both the successes and the challenges. Furthermore, they appreciated the diversity of the group: “We were from different disciplines, or even roles, like having Learning Assistants as well as teachers from different departments, so that was good.” One participant concluded that as a result of the PLC, “I’ve learned from other teachers, and this gave me, like, opportunities to, to even interact and even, uh, apart from, um, like in classroom, outside of classroom.” Although some of the teachers who participated

receive support in their classrooms from the LAs, the two rarely have the chance to interact with one another and collaborate with one another outside of class time. The PLC provided this space for them.

Time Social Validity. As with the previous two research questions, the theme of time continued to emerge with the question related to the social validity of the innovation. It was mentioned as a concern in the pre-innovation interviews. When describing what results in less-effective professional development circumstances, one participant said, “I think too often it’s like we learned about how to do something, and then it’s just like, ‘Okay, now go try that in your classroom.’” This participant emphasized that time to practice and reflect is often lacking in professional development. Another commented, “I’ve been also to, like, IB conferences or IB training sessions where you get those for like a couple days, you know, but it doesn’t really stay.”

After the PLC meetings, a total of three hours of time together, this concern seemed to have been proven true: “It felt a little rushed, and it would be nice to have more time to sit together.” The same participant went on to say, “But, I mean, time is all, it’s always, always an issue, obviously.” A different participant felt the time commitment was reasonable for the circumstances: “The time was fine. Like an hour I feel like was perfect to, um, to have productive discussions, but not too long that it kind of drags, or that we don’t want to do it, you know.” One clear indication that the participants found the innovation to be effective and useful was that many of them mentioned their desire for it to continue for a longer amount of time. One participant stated, “I would actually really enjoy continuing this type of PLC longer,” and another found it so valuable that they said, “I wish that we had more time to share with the rest of the staff.” In general, it

seemed that the consensus was it would have been more effective if the participants would have had more time to practice and reflect: “I wish, like, we had had more time . . . to kind of, yeah, really sort of experiment with some things and discuss things and share more of our strategies that we’re using.” In other words, the desire for more time was specific in terms of more time to discuss, share, practice, and reflect.

Overall Social Validity Results. In general, the quantitative and qualitative data suggest that the innovation of the PLC focused on ELLs was an effective and useful way for teachers and LAs to further their knowledge, skills, and understandings of how to support the ELLs in their classes. One key element of the social validity was the relevance of the content of the PLC as well as the growth mindsets of all the participants. The PLC meetings provided them with a safe space to connect, share, and learn from one another, and it ameliorated the isolation some teachers felt before their participation. Participants felt that more time would have been useful, but that the time they did have was well spent.

CHAPTER 5

DISCUSSION

This mixed methods action research project sought to empower secondary teachers at an international school to support the ELLs in their classes through the intervention of a PLC. There were three related research questions, and each question focused on a different topic: teachers' self-efficacy in supporting ELLs; teachers' use of differentiated instruction to support ELLs; and the social validity of the PLC as the format for the professional learning experience. Both the quantitative and qualitative measures suggest there was minimal change in the teachers' self-efficacy. However, after their participation in the PLC, they did feel they had access to and knowledge of more resources and teaching strategies. In addition, the participants' seemed to have developed a more complex understanding of the concept of differentiation as well as knowledge of a variety of strategies to differentiate their instruction to support ELLs. Most notably, the PLC proved to be an effective format to provide the participants with useful and relevant content, and several participants mentioned a desire for continued professional learning, which would provide them with more time to practice some of the differentiation strategies, receive feedback from their colleagues, and reflect on how to better support the ELLs in their classes. This discussion will be organized by the research questions. For each question, results are connected to the related literature and implications of these findings. Afterwards, I will review the limitations of the study and my efforts to mitigate those issues. The chapter will conclude with suggestions for adaptations to this intervention for the future, some of the broader implications for teaching practice, and potential next steps in terms of related research.

RQ 1a: Self-Efficacy

To begin, the first research question focused on teachers' self-efficacy regarding their ability to support ELLs as a result of the PLC intervention. Both the quantitative and qualitative data demonstrated minimal change in their self-efficacy after their participation in the innovation. Particularly in the pre-innovation interviews, much of the focus was on factors which limited participants' self-efficacy, most notably, in terms of limited practice. Since the pre-innovation interviews took place in September, participants were still in the process of familiarizing themselves with their classes, their students, and their students' needs. In the post-innovation interviews, though, there was more of a focus on factors which benefitted self-efficacy, and a couple of participants mentioned that they felt they now had more resources to support ELLs within the current context. This was likely due to the focus on classroom strategies throughout the PLC meetings.

The PLC meetings took place outside of regular working hours, and participation was voluntary. In all, there were three hours of meeting time throughout the course of the semester. With such a restricted amount of time together, there was only a certain amount of content which could reasonably be covered. Further, the short timeframe did not provide participants with the opportunity to put all of the strategies they learned about into practice, receive feedback, and reflect on them. There was also inconsistent attendance as some participants had school-related conflicts and others had personal conflicts which arose. Immediately before the final meeting, there was an outbreak of COVID-19 on the school campus, and two of the participants did not attend the final meeting due to personal issues which were exacerbated by the outbreak. Although there

was a system for participants to meet with me afterwards for a brief make-up session to cover the content missed, the make-up sessions were not able to replicate the same circumstances as the actual meetings, including the opportunities for discussion and collaboration. Because of the limited timeframe and the inconsistent attendance at meetings, a significant change in participants' self-efficacy was not entirely expected.

In terms of the existing literature regarding PLCs, Hall and Hord (2020) identify six dimensions of effective PLCs, and one of those dimensions is structural conditions, which includes “the when, where, and how that enable the community to meet” (p. 207). Because this PLC was not embedded into the work day, the lack of sufficient structural conditions limited its effectiveness. Moreover, when determining the number of meeting times and the length of each meeting, this had to be taken into account. Another issue raised by the time constraints was that not all of the intended content was covered. Increased efficacy “persuades faculty that each student can learn with the appropriate material and strategies” (Hall & Hord, 2020, p. 206). The time constraints did not permit the sharing of as many strategies and also did not provide the time necessary for the participants to implement the strategies in their classes for more than about two months. This likely limited the potential for significant growth in self-efficacy.

According to Slack (2019), “Effectively facilitated PLCs can be a powerful lever to build a culture of collective efficacy,” and in her year-long study, the participants demonstrated a “genuine transformation” after working together (p. 9). Increasing self-efficacy is complex, and it requires dedicated time and resources. Although a year-long study would have been more likely to yield a significant change in participants' self-

efficacy, the qualitative data indicated at least a small shift in the participants' thinking as the post-innovation interviews focused more on factors which benefit self-efficacy.

RQ 1b: Differentiated Instruction

The next research question related to participants' ability to differentiate instruction for ELLs as a result of the PLC intervention. Prior to the PLC meetings, each participant seemed to have a different idea of what constituted differentiated instruction, and the way the participants spoke about the concept varied greatly. This was likely due to the diverse group of participants and their backgrounds. The group of seven represented five different nationalities and five different native languages. Although the majority of them had been at the school for at least a couple of years, two of the participants were new to the school that August. As a result, the term "differentiation" brought to mind different strategies for each of them, and they all used different language to discuss those strategies in the pre-innovation interviews. Before the innovation, a couple of the participants focused on student choice as a means of differentiation, and many of them mentioned time differentiation as one of the main strategies they employed for ELLs. After their participation in the PLC meetings, though, there was more common language related to differentiation and a wider variety of strategies discussed, which demonstrated the participants' more complex understanding. This indicated that the PLC provided the participants with the opportunity to build a common understanding of differentiated instruction while also building their repertoire of classroom strategies, which aligned with the intentions of the innovation.

Although the data demonstrated a positive change in terms of differentiation, a greater change might have been possible if the research had taken place in the original

context planned. Initially, the research was supposed to be conducted in the spring semester at an international school which was providing professional learning opportunities on differentiation strategies for all secondary teachers. These opportunities were going to be embedded within the structural conditions of the school, and although participation in the research would have been voluntary, the professional learning would have been required of all secondary teachers at the school. Due to extenuating circumstances, the context shifted to TIS, and at TIS, there was not a plan in place for all secondary teachers to develop their differentiation skills. Whereas the original local context would have involved professional learning for all secondary teachers and allowed a common understanding to have been built school-wide, the structural conditions at TIS were not fully aligned with the original local context, which may have been a prohibitive factor in participants' growth.

There are two notable connections to the existing literature which help facilitate greater understanding of the results for this particular research question. The first connection relates to Second Language Acquisition Theory. Second Language Acquisition Theory consists of five hypotheses, and the fourth hypothesis, the Input Hypothesis, states that people acquire language when they are exposed to language containing structures a small degree more advanced than the person's current language level (Krashen, 1981). The focus of the second PLC meeting was disciplinary discourse, or the way people within a particular discipline discuss the content. Although distinct from content area vocabulary, the two concepts are related, and vocabulary proved a significant theme in the qualitative data, including during both the pre- and post-innovation interviews. Even in an earlier cycle of the study, comprehensible input was

identified as a focus during the interviews before the intervention. Participants perceived the need to provide comprehensible input for the ELLs in their classes and the value of developing students' content area vocabulary.

Another connection to the literature was related to Adult Learning Theory and its five learner characteristics (Merriam, 2004). One of those characteristics states that an adult learner is someone who is “problem centered and interested in immediate application of knowledge” (Merriam, 2004, p. 203). The participants in this study had the chance to apply the knowledge they gained from the content of the PLC meetings in their own classrooms. Because of the possibility of the immediate application of knowledge, the participants may have been more receptive to learning new strategies and eager to progress in terms of their abilities to differentiate for their students.

RQ 2: Social Validity

The final research question related to the social validity of the innovation, exploring the effectiveness and usefulness of the PLC intervention. Based on the data, the PLC innovation was an effective and useful way for participants to further their knowledge, skills, and understandings of how to support ELLs. One of the key contributors to the social validity of the PLC was the relevance of the content. In several of the pre-innovation interviews, the participants mentioned how the PLC fit with their current context and immediate professional needs. In addition, the participants all joined with a growth mindset, and the PLC meetings provided them with a designated time and space to connect, share, and learn from one another. This reduced the isolation some teachers felt before their participation. The diversity of the group, their initial motivation,

and the safe space provided during the meetings all contributed to the social validity of the innovation.

Within the context of this research, a PLC is a group of educators who come together to learn by sharing their expertise and working collaboratively to achieve their shared vision (Hall & Hord, 2020). At the first meeting, a shared vision in terms of our purpose, potential obstacles, and intended benefits was explicitly discussed. After collaboratively developing this shared vision, the focus was on sharing expertise. As Casteel and Ballantyne (2010) explain, “Professional development must build upon the current foundation of basic skills, knowledge, and areas of expertise of the educational personnel involved” (p. 6). Rather than bringing in an outside consultant to share their personal expertise with the group, the members of the community were relied upon to share their expertise with each other. In order for a PLC to be effective, “The collaborative culture must be interactive, whereby teachers and administrators utilize their expertise to share what they do in hopes of helping to improve the practice of others” (Carpenter, 2015, p. 684). Because the participants reported feeling it was a safe space in which they had the opportunity to interact with one another and share, that likely contributed to their feelings that it was a useful format.

The format of the PLC, particularly as a small group of motivated educators who all saw the relevance of the professional learning, had strong potential to affect significant positive change at a school. The resounding theme of time throughout the entire study truly resonated here in the sense that teachers needed more time to collaborate with one another. This requires appropriate structural conditions where the time to collaborate is embedded within the work day. With a group of motivated

educators, a PLC can still accomplish some positive change, but with the necessary structural conditions, this change has the potential to be more significant and sustainable.

Limitations

There were a few notable limitations of this action research study. The overarching limitation was the ongoing issues caused as a result of the COVID-19 pandemic. Because of the pandemic, all of the interviews were conducted virtually. Virtual PLC sessions were used to mitigate this concern, because if there was a lockdown or other related issue which caused at least one of the participants to transition into a distance learning model and work remotely, then this would not affect their ability to participate. In addition, rather than collecting data through classroom observation, participants' perceptions were used, and this raises questions about their accuracy in self-report. However, once again, self-report mitigated the need for in person assessment, which may not have been possible because of the inconsistent closings and changes as a result of COVID-19. The lack of consistency and predictability of learning models prevented classroom observation as a dependable plan. Furthermore, as the data was based on self-report, it was likely to be biased to an extent, because it was based on the participants' personal perceptions. Yet, changes in self-efficacy and use of differentiation strategies by self-report was the most feasible and reliable option for intervention and data collection procedures.

Another limitation was the potential for social desirability bias. I was a full participant in the research, and also one of the participants' colleagues. Although it was my first year at TIS, and we had little time to develop personal relationships, I still lived relatively close to my colleagues and those relationships were in the process of being

built. In spite of this fact, it was a relatively small school with about 35 teachers total. Particularly in the interviews, the participants were likely to provide responses they anticipated that I would want to hear. This limitation was mitigated in a couple of ways. First, the principal and the student services coordinator were asked to help decide which teachers to invite to participate in the PLC. Also, the study surveys were confidential, with each participant creating a unique identifier in order to allow the anonymous analysis of their pre- and post-innovation surveys. Because I was not selecting all of the participants and I had confidential quantitative survey data to complement the qualitative interview data, this worked to mitigate the effect of social desirability.

Finally, there were limitations in time which affected the study. In particular, although there was dedicated time for professional learning throughout the school year, the PLC meetings were not allowed to be held during that time. As a result, the PLC meetings had to be held outside of regular school hours. Because of this, there were inconsistencies with participant attendance. This also required participants to demonstrate a certain level of motivation by committing to engage in the activity. One of the participants mentioned that if the time commitment had been greater--for example, if the meetings had been an hour and a half instead of just an hour--then they would have been more hesitant and less likely to agree to participate. Also, although there was administrative support in the sense that school leadership was aware of the project and allowed the project to take place on school premises, there was no administrative presence at the actual PLC meetings. Even though this enabled a safe space for participants to express their views, at the same time, it demonstrated a limitation in the structural conditions necessary for sustaining an effective PLC.

Implications for Practice

This study was effective in establishing a PLC with a diverse group of motivated participants, all of whom were either teachers or LAs at the secondary level at an international school. The content of the PLC focused on empowering participants to support the ELLs in their classes by equipping them with knowledge, skills, and understanding regarding language acquisition and differentiated instruction. After their participation in the PLC, the participants demonstrated increased knowledge of resources within the local context for supporting ELLs. Through their participation, they developed a more complex understanding of the concept of differentiation as well as knowledge of a variety of strategies to differentiate their instruction to support ELLs. Most significantly, they found the PLC to be an effective and useful way to connect with their colleagues and share their expertise.

If repeated in the future, there are a number of adjustments which might be made, as a result of the obtained data in this study, to increase the efficacy and utility of the innovation. First, the structural conditions of when the meetings take place should be carefully considered. Administrative support could be demonstrated by providing professional learning time during regular working hours for the meetings. This would likely enable increased participation from more members of the school community, as well as more consistent attendance. Although the meeting length of about an hour was considered appropriate, it would have been helpful to meet on a monthly basis throughout the school year for a total of eight to ten meetings. This would have provided the group with more time to work toward their shared vision, as it would have allowed for the sharing of more content related to language acquisition and differentiation strategies. It

also would have allowed for more instructional time overall, and during this instructional time, participants would have had the opportunity to implement the strategies in their classes, receive observational feedback, and reflect on the experience. Even though self-reported data was appropriate given the circumstances, observational data has the potential to be less biased and to facilitate enhanced opportunities for feedback. Then, the participants would have the chance to apply that feedback and take recommendations into account in their teaching practice, enabling further growth.

Based on the actual circumstances of the research, there are several aspects of the innovation which would be essential to maintain. First, just as differentiation and choice are beneficial to students in the classroom, these are also key components which contribute to improved professional learning for adults, as suggested by Adult Learning Theory. According to the theory, adult learners have independent self-concepts and the ability to direct their own learning; however, this is not always taken into account in the planning of professional development for teachers (Merriam, 2004). The initial interest of all of the participants, as well as the relevancy of the topic, created a productive atmosphere at each of the meetings. Rather than being mandated to attend training, they chose to engage in this professional learning opportunity and approached it with optimism and openness. This aided in establishing a safe environment full of collegial support. To replicate such an environment, it would be necessary to provide participants with the option to join the PLC, rather than making it compulsory. The small size of the group gave space for everyone to engage in discussion, and the diversity of the participants enriched the discussions, as it included a variety of perspectives. This diversity was achieved by including teachers from a number of different grades levels as

well as from a number of different content areas. The PLC was context specific, and there was shared leadership within the room. At times, when an outside consultant leads professional development, they are less familiar with the local context and participants may be more passive in the learning. It would likely be most effective for the PLC to be facilitated by someone from within the school community to ensure they are appropriately familiar with the school context and the classroom experience. Lastly, the content should be adaptable from meeting to meeting. In this way, the agenda can be modified to meet participants' needs and concerns as they arise, ensuring relevance.

In the course of this action research, progress was made in the empowerment of teachers to support ELLs in their classes, but there was still a continued need for further related professional learning opportunities. As more than 16% of the secondary students at TIS were developing their English language proficiency, all teachers and LAs needed appropriate training to ensure they were meeting the needs of all of the students in their classes. This training had the potential to be most meaningful if it occurred in small cohorts with room for each participant to have a voice. For the future, each cohort should be composed of teachers from a variety of content areas, and the meetings should be embedded within the structural conditions of the school. This could allow for the development of a campus-wide understanding of differentiation on the part of the teachers which then could contribute to improved student achievement in the classroom.

Implications for Research

This study focused on the teachers' perspectives, in terms of their self-efficacy and their implementation of differentiated instruction to support ELLs in their classes. Future research studies should focus on the students' perspectives and determining how

and to what extent the different methods of differentiation enable student success. It would be beneficial to note if particular strategies lend themselves more easily to certain content areas, and case studies might be done to see whether or not particular strategies are more or less appropriate for certain students.

One topic which continued to arise at the PLC meetings was the cultural and linguistic capital of the students. It would be helpful to consider ways in which this might be taken into account and utilized as a resource in a more culturally-responsive curriculum in research in the future. Then, it would be useful to determine whether or not such a curriculum led to increased student performance. Moreover, within the local context, the vast majority of ELLs spoke French. This is not always that case at international schools, though, and a similar innovation might be employed at an international school with different student demographics to be able to identify the most efficient way to equip teachers to support students with more varied linguistic backgrounds.

Conclusion

This study provided professional learning opportunities for secondary teachers at an international school to equip them with the resources they needed to support the ELLs in their classes. Even though the school encouraged all students, including ELLs, to select the courses that best fit their interests, abilities, and educational goals, for some students, this choice was limited due to their developing English language proficiency levels. Specifically, students in grades 11 and 12 who still required EAL support did not participate in IBDP English Language & Literature courses, and therefore, they were unable to attain an IB diploma. This was a problem because it limited ELLs potential to

earn an IB diploma, which could affect their post-secondary options. The innovation to address this problem consisted of a PLC employing aspects of Adult Learning Theory to share content related to language acquisition and differentiation. The intended outcomes were increased self-efficacy and increased implementation of differentiated instruction. The social validity of the PLC was another factor under consideration. Participants demonstrated improved awareness of resources within the local context as well as enhanced understanding of differentiation and a wider variety of teaching strategies. The most compelling result, though, was the participant reports of the effectiveness and utility of the PLC format. Participants approached the experience with open minds and encountered a safe space where they felt comfortable discussing their challenges and reassured by the collegial support they received. Educators relentlessly strive to meet the needs of their individual students by remaining flexible and responsive, and administrators need to demonstrate a similar level of flexibility and responsiveness in order to provide the most meaningful professional learning opportunities for their faculty and staff.

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APPENDIX A
PRE-INNOVATION SURVEY QUESTIONS

Self-Efficacy

1. I am knowledgeable regarding how to support ELLs.
2. I have the necessary skills to support ELLs.
3. I feel confident supporting ELLs in my classes.

Differentiation

4. I am knowledgeable regarding how to differentiate instruction.
5. I implement differentiated instruction in my classes.
6. I use differentiated instruction to support ELLs in my classes.

PLC Meeting Content***Disciplinary Discourse***

7. I understand the components of disciplinary discourse.
8. I know how to present content while:
 - a. utilizing language enhancements.
 - b. building upon students' prior knowledge.
9. I am able to identify opportunities where real-life situations can be incorporated into lessons.

Assessment

10. I understand the importance of performing regular formative assessments for content and knowledge.
11. I know how to use different formative assessments for:
 - a. reading.
 - b. writing.
 - c. oral language.
12. I know how to identify ways to use assessments to differentiate learning.

Metalinguistic Strategies

13. I understand the role of metalinguistic strategies in supporting ELLs' access to complex tasks.
14. I understand that the relationship between metalinguistic awareness and metacognitive tools is the explicit teaching of language as form, function, and meaning.
15. I know how to identify opportunities to talk to students about the way language works to make meaning out of academic talk and texts.

APPENDIX B
POST-INNOVATION SURVEY QUESTIONS

Self-Efficacy

1. I am knowledgeable regarding how to support ELLs.
2. I have the necessary skills to support ELLs.
3. I feel confident supporting ELLs in my classes.

Differentiation

4. I am knowledgeable regarding how to differentiate instruction.
5. I implement differentiated instruction in my classes.
6. I use differentiated instruction to support ELLs in my classes.

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13. I understand the role of metalinguistic strategies in supporting ELLs' access to complex tasks.
14. I understand that the relationship between metalinguistic awareness and metacognitive tools is the explicit teaching of language as form, function, and meaning.
15. I know how to identify opportunities to talk to students about the way language works to make meaning out of academic talk and texts.

Overall

16. Which meeting did you find most useful in terms of supporting the ELLs in your classes?
17. Which topic did you find most useful in terms of supporting the ELLs in your classes?

Social Validity

18. The PLC meetings were an effective way to share the information regarding how to support ELLs.
19. The content of the PLC meetings was useful in terms of ways to support ELLs.

APPENDIX C

PRE-INNOVATION INTERVIEW QUESTIONS

Self-Efficacy

1. Can you tell me about your experience supporting ELLs?
2. Could you describe in as much detail as possible a situation in which you felt confident supporting ELLs?
3. Currently, how confident do you feel about supporting ELLs in your classes? Why?

Differentiation

4. What experience do you have with differentiation in your content area?
5. What are some of the differentiation methods you have implemented in your classes?
6. How do you differentiate specifically to support ELLs?

Social Validity

7. What are some experiences you have had with professional learning communities or professional learning, in general?
8. How do you feel about participating in this particular group, or professional learning community, focused on ELLs?

APPENDIX D
POST-INNOVATION INTERVIEW QUESTIONS

Self-Efficacy

1. Overall, how do you feel about your ability to support the ELLs in your classes?
2. How did your participation in the PLC affect your knowledge and skills about supporting ELLs?

Differentiation


3. Describe some of the methods of differentiation you learned about.
4. Could you explain something in particular which you implemented this semester which was effective in supporting ELLs?

Social Validity

5. Of the three meetings--disciplinary discourse, assessment, and metalinguistic strategies--which did you find most useful and why?
6. What were some of the strengths and areas for improvement with the PLC format?

APPENDIX E
DIGITAL TOOLKIT



Meet 



Generate link

Class code 

bltany3 

Upcoming

No work due soon

 Announce something to your class 

 Leslie Anne Schenk
Oct 19, 2022 

*** ANNOUNCEMENT ***

Thank you for your attendance today. Please note that our next meeting will be on **Wednesday, November 16**, and the focus will be on assessment. I will be in touch beforehand via email. Please plan on bringing:

- a student writing sample from an ELL in your class
- the prompt or assignment for the writing sample

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