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Promoting Instructional Discourse for Secondary Teachers of Newcomer Students:
The Practice of Integrated Language and Content Instruction

By

Dennis D. Caindec

A dissertation submitted in partial satisfaction of the

requirements for the degree of

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Committee in charge:

Professor Heinrich Mintrop, Chair
Professor Patricia Baquedano-Lopez
Professor Alex Saragoza

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ABSTRACT

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Professor Heinrich Mintrop, Chair

Instructional time for newcomer English learners necessitates a balanced integration of language and content within the curriculum (Batt, 2008) and that the development of the academic uses of language for newcomer students becomes the obligation of every secondary content discipline teacher to engage these students in meaningful language use for content specific purposes (Heritage et al., 2015). Now more than ever, secondary content area teachers are critical actors in ensuring that the necessary language skills through their content instruction are taught and supported for newcomer students in their classes. Thus, this design development research employs a robust intervention that promotes a systematic approach for an interdisciplinary team of secondary content area teachers to have productive conversations around instruction in order to better understand and implement an integrated language and content instruction for newcomer students.

Set in a small high school located at a predominantly immigrant neighborhood in a large urban community in Northern California, this study focused on three teachers as a teacher team who serve newcomer students. I found that participants in this study struggled to develop a common understanding and enacting effective language and content integration in classroom practice. However, findings suggested promising efficacy of this design study, particularly around improving participants' instructional mindset along the dimensions of *language and content integration understanding* and *language and content integration in practice*. I present the utility of the Teacher Team Cycle of Inquiry as a systematic, structured sequence of activities that reframes the responsibility of teaching language development for newcomer students as one of a teacher team's collective and shared responsibility. This teacher team structure, along with the set of learning activities, can serve as a catalyst for capacity building for teachers to improve their practice and understanding of integrating language and content.

DEDICATION

To all the first generation, immigrant children—I see you. I stand with you. This is for you.

To my mom, dad, and sister—the American Dream is alive and well. Your encouragement and support have been most critical in making this dream a reality. I hope I have made you proud.

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ACKNOWLEDGEMENTS

"Two roads diverged in a wood, and I—
I took the one less traveled by, And that has made all the difference."
– Robert Frost

The journey in completing this work would not have been possible without the undying love and support of people who have helped from start to finish. Before I even decided to take the path less traveled, I had to first get on that road. Getting on that road required me to have the access and inspiration from people. I want to express my deepest gratitude to Alexandra Anormaliza, Dr. Arnel Calvario, and Dariana Castro for writing my letters of recommendation while I was applying to graduate school. Getting on that road wouldn't have been possible without your words of wisdom and you believing in me. I am indebted to your mentorship, guidance, and friendship. Entry on this road also required me to create exceptional writing pieces that demonstrated who I am as a person and what I could contribute to society. These writing pieces wouldn't have been to the level of refinement without the vetting from Dr. Damon Andrew, James Rice, Dr. Christine Malsbary, and Lawrence Almanzar; my sincere thanks to you all. Beginning my journey required inspiration and courage, so I looked to Dr. Erwin Cabrera, Dr. Michelle Castelo, Dr. Danny Walsh, Dr. Joanna Yip and Dr. Christine Malsbary for paving the way—I thank you.

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CHAPTER 1: PROBLEM OF PRACTICE

INTRODUCTION

The new California Standards expect a more cohesive integration of literacy and content across discipline specific content area classes, such as Social Studies, Science, Math and English Language Arts. Guidance around the implementation of these expectations is often lacking or at most insufficient. Teachers are challenged to implement the instructional demands of these Standards due to their increased content expectations and their requirements of what students are to do with the academic language as they engage in the content-area learning. The language expectations of the Standards pose an even more difficult task for secondary teachers who teach emerging bilinguals, commonly known as English learners (ELs), since ELs must consistently "double the work" in acquiring abstract content knowledge and analytical procedures while simultaneously learning English as an additional language (Heritage et al., 2015). But secondary content area teachers, particularly those who teach ELs, often lack the training in language and literacy practices that enable them to effectively integrate English language development and content in their instruction (Fillmore & Snow, 2000; Gandara, 1997). In a longitudinal analysis of academic language proficiency outcomes for adolescent English learners in the U.S., Slama's (2011) findings emphasize the critical urgency for academic language interventions for adolescent English learners. Thus, secondary content area teachers have a responsibility to ensure that adolescent English learner students develop the necessary academic language and English language learning within a subject matter content (Schleppegrell & Colombi, 2002).

One of the prevalent challenges of teaching ELs is the charge for secondary teachers to integrate academic language development within their content area instruction. Academic language is described as the formal styles and registers within specific subject matter contents (Dalton-Puffer, 2011), including the ability to use higher order thinking skills and to communicate effectively through reading, writing, speaking and listening in content specific classroom discourse (Singhal, 2004). Echevarria & Short (2010) define language and content integration as a way of complementing content knowledge and skills, identified in content area standards, with aspects of academic language needed for instruction of content concepts. Yet, the challenge for secondary teachers of adolescent newcomer students—recently arrived English learners—is bigger: they need to integrate specific academic language within a subject matter content, but they are also to incorporate broader English language development learning within these courses. Language learning is framed in terms of language function, language form, and language meaning. Banegas (2016) asserts that when language plays a functional role, English language development could be taught by examining how particular subject matter discourses are constructed. Coyle (2007) offers a perspective that focuses on English language form and meaning: the *language of learning* of key words and phrases to access content (such as Tier III, discipline specific terminology), the *language for learning* in regards to the necessary language required to perform classroom tasks such as debating, organizing, and presenting (such as Tier II and I words, applicable across multiple contexts), and the *language through learning* that allows for students to engage in the ambiguity and unpredictability of language learning that emerges from students' cognitive process (such as the use of clarifying questions or probing questions). ,

The study takes place in an inter-disciplinary team of teachers in a small urban high school who share a subgroup of students within a Newcomer Pathways program for recently arrived English learner students. At Hamilton High, teachers are organized in inter-disciplinary grade level teams that teach the same subgroup of students. Team meetings are spaces where teachers are expected to have conversations about instruction and their students. Inter-disciplinary grade level teachers vary in expertise and experience in teaching newcomer English learners. Some teachers implement ELD (English Language Development) instructional strategies that integrate content and language, but often manifest as "integrated" by name only. Therefore, the challenge for a team of interdisciplinary secondary teachers is how to productively engage in conversations in order to better understand and effectively implement integrated language and content instruction for newcomer students.

ORGANIZATIONAL CONTEXT

Hamilton High School (Hamilton HS) is a small high school (<500 students) located in a shifting demographic of a predominantly immigrant neighborhood within a large urban community in Northern California. The school has a Newcomer Pathway program that is designed to support and cater to the academic and socio-emotional needs of recently arrived immigrant adolescents. The school operates under a comprehensive school model that utilizes support from an intermediary organization that is known for its promising outcomes for newcomer students. Within this school's model, newcomer students are combined in 9th and 10th grade classes, while 11th and 12th grade students are also combined in their respective courses. All core content classes are instructed in English; however newcomer students are continually supported to leverage their primary language as well. The school uses a variety of benchmarks and indicators to evaluate student growth that includes: course pass rates, standardized test results, graduation rates, and CELDT exam scores.

Hamilton High School's Newcomer Pathway program serves a distinct student population of English learners—newcomer students. Newcomer students at this school are recently arrived immigrant teenagers who predominantly speak Spanish, Cantonese or Vietnamese as their primary home language, and they have only been in the United States for less than a year. Most of the newcomer students are from China (29%), El Salvador (19%), Guatemala (14%), Honduras (20%), Vietnam (7%), and Mexico (5%). Students' age range varies from 14-20 years old and a majority, if not all, comes with little or no knowledge of the English language but bring various "funds of knowledge" (Gonzalez et al., 2013) and a range of understanding of their home language and culture.

LOCAL NEEDS ASSESSMENT

To better understand the current structures and practices that exist within the context of Hamilton High School, I conducted several rounds of data collection organized in the categories of School Structure, Established Collaborative Practices, General Classroom Instruction Observations, English Language Development and Content Integrated Practices Observed, and Student Perspectives. I documented my observations, gathered artifacts, used semi-structured interviews (see Appendix A, p.153) and administered a survey (see Appendix A, p. 154) to gather more information about the school, teachers and students.

The enabling structures allotted for purposeful teacher learning existed in two mechanisms within the school schedule: interdisciplinary grade level team meetings occurred twice a week and a school-wide staff meeting for an hour and fifteen minutes every Friday morning. Teacher teams also had from 9:25 am to 10:05 am on Friday mornings to engage in a so called Kid Talk protocol that allowed a teacher team to discuss specific students who are of concern or needs immediate intervention. Grade level team meetings and full staff meetings were often facilitated by the instructional coach, the Assistant Principal for Curriculum and Instruction or one of the teacher team members.

Though there was scheduled time for teachers to discuss and raise language development instruction in content area classes, how effective or frequent these conversations translated into practice varied across classrooms. When asked to describe a specific teaching practice or an instructional strategy that they had implemented in their classes to integrate language and content, teachers during the team meeting noted (Survey, January 3, 2017):

> *"Using language and content objectives to inform students what we are doing each day."*

> *"I implemented a participation quiz only after I had worked with grade level teams to share this practice through video, classroom observations, and articles."*

> *"Taking specific notes for newcomer students to use as a resource and clearer directions for students"*

> *"I have taken cell phones out of the picture in my classroom. They go away immediately when the kids get to class. This practice has helped [students] focus tremendously."*

> *"Using positive encouragement instead of negative consequences to engage students in learning."*

Teachers varied in their responses when asked to describe teaching practices or instructional strategies they had previously implemented. Their answers ranged from instructional strategies to more motivational strategies for students.

In an interview with the school's instructional coach, a fifth year staff member and in her third year as coach, she described how team meetings and structures were working at Hamilton High:

> *"Varied… so for one… we have one large ninth and tenth grade team this year which used to be two separate teams last year. Both of those teams are now together as one big team. It is working really well… There's a lot of trust and collegiality and they are making decisions together… We have another large eleventh and twelfth grade team this year, which again was composed of two smaller teams last year. They are not working as well together; they also have more demands on them as a lot of them teach A.P. classes. In addition, their [11th/12th grade team's] big cry is to have personal planning time. They'd rather be by themselves than with each other." (Interview, December 14, 2016)*

Asked about opportunities where teachers could have meaningful conversations around instruction and teaching practices, the instructional coach responded:

> *"I mean most of that is happening in our grade level team, otherwise after school… In prior years, there was little to no collaboration… I would say one of our most successful kind of pairs of teachers to collaborate is because they carpool together… So a lot of that instructional talk in their plans, they come up with [with] their raffle ticket system or the norms that they're focusing on… like all of those conversation happen in the car."* *(Interview, December 14, 2016)*

During the team meeting, one teacher described a time when team meetings felt challenging as:

> *"Team meetings are challenging when we don't know how to move forward. They are also challenging when what we want to do as a team veers from what the rest of the school wants to do"(Survey, January 3, 2017).*

Meanwhile, another teacher added:

> *"When members don't have enough compelling content to push/incentivize the implementation of new instructional strategies" (Survey, January 3, 2017).*

Finally, regarding resources and support for staff aside from one-on-one coaching, the instructional coach mentioned:

> *"So we've been accumulating resources in a shared Google folder that everyone has access to so everything we've been collecting as far as curriculum or PD (professional development) resources are all available to everyone. In addition, everybody (who teaches newcomer core classes) signed up for the I-Network (intermediary organization) I-Share website." (Interview, December 14, 2016)*

ESTABLISHED COLLABORATIVE PRACTICES

The school had several assets that not only contributed to a culture of collaboration and positivity among staff members, but also to an openness about sharing their classroom practice with others. The school engaged and made it a point to abide by school wide values and meeting norms. These norms were printed in every staff and team agendas as well as used during process checks at the end of all meetings. Facilitation and meeting roles rotated for each meeting. Teachers were seated in a circular formation around a room during grade level team meetings. Staff and team meetings always began with a check-in question from the facilitator that prompted everyone to share a response, either in dyads or as a whole group. Teachers engaged in "learning walk" practices where they could visit another teacher in the school to observe their class, seek feedback, or reflect on their own practice using an observation tool that asked teachers to state what they saw in the class, practices they liked during the instruction, and practices they would like to adapt in their own classroom. The school also engaged in varied protocols that included looking at teacher instructional units/lessons using a Critical Friends protocol. Most recently, some teachers had been open to videotaping their classroom practices

and analyzing the video with their team members using a video observation protocol. Most of these practices of collaborative work were new, as the instructional coach described:

> *"I'm happy to be able to kind of see how the school has changed when I started as a teacher. We had no team meetings at all. We had department meetings, which were very unhelpful because nobody really has content partners. Since we're so small so since the transition to grade level teams the last few years, I would say are… some kind of consistency is have really strengthened through our classrooms. I mean there's just been a huge improvement I would say just from being able to have grade level teams."*
> *(Interview, December 14, 2016)*

GENERAL CLASSROOM INSTRUCTION OBSERVATIONS

In a school walkthrough on October 12, 2016, evidence from nine classroom observations indicated that there were various student participation structures. Across all classrooms, students were engaged in a DO NOW that had them engaged in a task that would last for 5 to 8 minutes of the beginning of class. The DO NOWs ranged from a problem they learned about from a previous lesson or a question that had them thinking about something they were going to engage within the day's lesson. Student group configurations were present across all classrooms. Students were seated in groups of 4 or 5 students around a large table in the newcomer classes. Students who shared the same primary language were paired, and often the student who had a better grasp of English supported as a translator for the other student. Across all classrooms, the use of primary language (L1) was encouraged and observed through teachers translating to the students in Spanish, students translating for other students, or students using their phones as translation devices. Explicit and visual instructions for tasks were also present across some observed classrooms. The directions for students were either written on their worksheets, on a PowerPoint, or on the board, though the explicitness varied across classrooms. In an English classroom, the directions included sentence frames for students:

> *Find on the page:*
> *Q1: What are three things that go into the decision to send….*
> *A1: Three things that go into the decision to…*
> *A2: Three ways in which…*

In a Science classroom, the directions on the board asked students to:
> *With your group, answer these three questions:*
> * *What is the name of your biome?*
> * *What is one country that has your biome?*
> * *Is your biome more dry or wet?*

While in one of the Social Studies classes observed, the directions were written as:
> *Directions:*
> *Correct Lesson 1 Review*
> *Read p. 158-160*
> *Look up at least 5 words*
> *Do Lesson 2 Review on p. 160*

In two of the classes observed, a math and a social studies class, students were mostly writing in their notebooks or a worksheet and copied ideas down, either directly from the textbook or from the board. When individual students were asked about what they were doing and what they were learning, the students mentioned copying down the information. They could explain parts of the content being taught. Some students said, "I don't know." In five of the observed classrooms, there was also evidence of teachers speaking to some of their students in Spanish. Teachers resorted to speaking Spanish to Spanish speaking students when they appeared confused about the directions or if they needed clarity regarding the content of the lesson.

Overall, across all classrooms, students were given individual work with opportunities to help and seek help from others seated at their tables. In some classrooms, groups were given a task and instructed to complete it together. In addition, scaffolding was provided on an ad-hoc basis by the teacher or by fellow peers; though some classrooms were more intentional about the use of scaffolds to be provided specifically for struggling students. In three classrooms, multiple written scaffolds—as well as teacher and peer support—allowed students who initially struggled to work on a task at the beginning of the lesson to finally complete the task by the end of the lesson. In a majority of the classrooms, students were involved in activities at the direction of the teacher. Some classrooms had teachers apprenticing and guiding students in learning routines and procedures during activities through their questions or explicit modeling. In a majority of the classrooms, students were generally on task and completed their work. For some classrooms, students were working collaboratively with occasional prompting from the teacher, while others relied heavily on students in their table groups as their first form of support when unable to individually complete or understand a task.

ENGLISH LANGUAGE DEVELOPMENT AND CONTENT INTEGRATED PRACTICES OBSERVED

In the same classroom walkthrough visits, eight of the nine classroom observed had evidence of scaffolding for students that included the use of graphic organizers, visual aides and sentence starters displayed on the board, on an anchor chart or on the student worksheet. Students utilized some of these graphic organizers more so than others. The graphic organizers varied in layout: some had boxes in to which students could write specific ideas, while other organizers provided a structure for students to write their ideas in a logical, procedural way. The uses of visual aides on students' worksheets or within activities during the lesson were also visible in eight of the nine classrooms.

In six of the nine classrooms, instructional opportunities for students to read, write, listen or speak in English were present. In one of the English classes, the classroom structure included a student leading parts of the lesson, such as the reader of the day's class objective. In a social studies class, the opening class structure required students to go around the room and speak to another student using the following sentence frames: *"Hi _____, my favorite food is… Something I like to do is…"* In a math class, students were working on transformations as part of their DO NOW that asked them to describe the given transformation. On the board were the words *"clockwise"* and *"counter-clockwise"* that included illustrations of the words. And in a social studies class, the words immigrant (noun) and immigrate (verb) and the part of speech were among the listed vocabulary on the board, a poster on the wall included the *root word, -ism form, -ist form, and an image*, and a poster that listed the group work expectations for students.

Language development within content instruction centered mostly on language form and meaning.

In two of the classrooms, there was evidence of explicit language instruction needed to express relationships between new ideas and concepts through language functions. In an English class, the teacher asked students to "infer" by using details; she even rephrased the word "infer" as "*having students guess*" based on provided details. At one point, the teacher used familiar ideas that students knew in order to describe and elaborate on the phrase "*smells sweaty*" while the class discussed the various, complex ways to write and think about sensory details. While in a Social Studies class, the teacher introduced abstract concepts using familiar language where students discussed the concepts of race, gender and ethnicity: students had to *"agree or disagree"* on provided controversial statements and also had to persuade other students using facts with the use of accompanying sentence frames. For both of these classrooms however, the turn and talk ELD strategy was implemented without much guidance around the expected academic language students were to use while in conversation—aside from the provision of sentence frames. Additionally, there were no clear directions as to how the students were to engage in the pair conversations as well as ways to ascertain whether students understood the content while discussing with a partner.

In three of the classes, adapted text in both narrative and non-fiction form was explored Additionally, these same classrooms performed pre-, during-, and post- reading activities using the adapted texts. Additionally, in two of the classes, background knowledge of students was utilized through a non-fiction text that explored the topic on *Border Crossing*. Students also reviewed what they read so far in small groups and then in a whole class discussion. In the discussion, students shared the title of stories they had read so far, the genre of the story, described what a narrative meant, and identified the author of the story. In another class, there was a section in the lesson where students shared what they learned so far about the concepts of race, gender and ethnicity, first in their small groups and then in large groups. For both classrooms, the use of primary language (L1) was encouraged. However, while students spoke in their small groups or large groups using sentence frames, the level of academic conversation among students varied across groups and the frequency of language production was prevalent for only a handful of students.

Academic vocabulary was taught across classrooms in varied ways. In two classrooms, new vocabulary was presented in isolation from the activity within the lesson. Meanwhile in other classrooms, teachers were more intentional about introducing key academic vocabulary; teachers reinforced the key academic terms throughout the lesson as students had to use the new vocabulary in order to complete a group task. Across all classes, a variation in language development was evident. For some classes, the teacher was mostly in front of the class talking with an occasional call and response from students. Meanwhile, other classes engaged students in at least one or multiple language production exercises to reinforce a content goal. The language production exercises however were often limited to basic turn and talk strategies or group work configurations. There was no evidence of intentionality in what students were expected to say to one another about the content, and how students were to speak with one another to reinforce content understanding. At least three classes had identifiable language goals or objectives during the lessons and at least two classes had a clear and deliberate focus on academic language, vocabulary, and structures for student talk. As for primary language support, teachers taught their content primarily in English, but they would often resort to a majority of students' primary language—Spanish—to translate. This left non-Spanish speaking students to

either use other students who spoke their primary language as a language support or utilize their phones as translation devices. Students who spoke similar languages were often seated next to each other or sat together as a table group. For the most part, students used the language with which they were most comfortable with and peer support in their primary language was encouraged. Lastly, leveled texts—either teacher created or externally produced—were available at students' disposal in at least three of the classrooms. Meanwhile, other classes had only one anchor text, such as a common textbook, available for students' use.

When asked about how teachers of newcomer students were implementing ELD strategies in their classrooms, the instructional coach responded:

> *"We are designing our grade level teams around like resources… and collaboration… there are documents… we actually went through strategies… we had a tracker of like I'm going to try this and you tracked out you tracked which strategies you were trying and when you did and they were sharing with each other like we are very focused on this kind of strategy and collaboration. We haven't focused on that this year since we did that last year but that means a lot of our veteran teachers who are new to teaching newcomers are having a hard time figuring out how to help newcomer students." (Interview, December 14, 2016)*

Meanwhile, one of the ELA teachers described her use of an ELD strategy as:

> *"This semester, I am going to implement a "microlab" activity in regards to discussing reading. In a nutshell, within a group of 4-5 students, the "microlab" is to get kids talking about their reading in a meaningful way, with tangible results because each student also engages in a writing activity post-discussion."(Survey, January 3, 2017).*

STUDENT PERSPECTIVES

In a student panel held during the same day as the walkthrough, seven students—two 9th graders and five 10th graders—participated in a conversation with some school visitors. All students had been in the country for less than a year. When asked about some things teachers were doing in class that were helping them learn, the students talked about being able to practice English through designated talk time in class. In addition, students enjoyed learning about other countries from their classmates. When asked to describe how they were learning the English that they needed in order to understand what was going on in class, the students responded with: *"the opportunity to talk about other countries from their classmates," "writing down words and asking what they mean," "the learning of different languages and learning of new language—English."* Additionally, students raised how they liked it when teachers provided more examples and when they spelled and pronounced words for them. One student mentioned the afterschool Newcomer club where students had the opportunity to learn more English. Students also surfaced being able to *"work in groups, think together, and share their ideas."* One Spanish-speaking student raised an interesting comment about wanting their teachers to *"speak in English to learn more;"* the student was referring to the tendency of teachers to speak Spanish in order to translate for Spanish speaking students.

SUMMARY

In summary, I found assets that I could build on for the design of my intervention within the current school structures, collaborative practices, general instructional formats, and ELD-content practices.   Evident were consistent structures and routines implemented across a majority of the classrooms that facilitated students to talk and practice English, especially during classroom opening activities. Across all classrooms, the preponderance of evidence suggested that half of all the classrooms displayed instruction where students were engaged in tasks and activities that promoted student-to-student interaction. Within the instructional period, primary language was leveraged as another form of support. The remaining half of the classrooms showed no evidence of structures that facilitated for students to actively engage in English. Within the school schedule, teachers were afforded protected time and spaces to meet so that opportunities for discussions regarding instruction as a staff and in grade level teams could take place. Opportunities to observe other teachers' practice and be observed in one's own classrooms or through video were also instituted. However, a closer examination of these teacher practices and classroom instruction revealed that teacher team discussions lacked organization and focus around instruction despite the current structures in place. Instead of teaching subject matter content with a clear and deliberate focus on academic language, vocabulary, and structures for student interaction, classroom instruction at Hamilton High School was prone to be relegated to mere implementation of ELD strategies that was unclear as to how academic content was meaningfully integrated.

DESIGN CHALLENGE

Instructional time for English learners necessitated a balanced integration of language and content within the curriculum (Batt, 2008). As I indicated in the needs assessment, when secondary teachers implemented a focus on language skills in their content instruction, they usually did so in ways that enacted ELD strategies without intentionality about what students were to say and how students were to speak with one another to demonstrate their content understanding. The challenge for secondary teachers of newcomer students was twofold: 1) discuss and prioritize matters surrounding instruction during designated team meeting time and 2) understand and implement classroom instruction that integrated English language development and subject matter content beyond mere ELD strategy implementation. While a range of factors could contribute to a student's educational challenges, with some of which were beyond the school's control, this study aimed to design a robust intervention that promoted and supported productive conversations for secondary content area teachers during team meetings about integrated language and content during instruction for newcomer students.

DEFINING PROBLEMATIC STATE

Based on the needs assessment, team meeting conversations and agenda items often prioritized logistics and student behavior concerns. Agenda items that were prominent were school personnel issues, field trips and school-wide activities, behaviors, and attendance concerns. The team frequently tabled discussions around issues of instruction when logistical items seemed to have more pressing deadlines or was perceived as urgent. When discussions about instruction did happen, they occurred in ways that neither had follow up conversations to revisit instructional concerns nor connected from prior team discussions. These disjointed meeting conversations materialized through: "Critical Friends protocols" where teachers

received feedback from peers on their upcoming lesson without follow-up on how the lesson went, "Learning Walks" where teachers visited other colleagues' classrooms using a tool that asked them to note things they liked and wanted to adapt in their own practice without a debrief conversation about what teachers observed, and video observation protocols where teachers examined various instructional videos that highlighted a particular ELD strategy without opportunities for reflection. Though agendas and protocols existed as a way to facilitate conversations about instruction, meaningful conversations about matters surrounding instruction were often unrealized since a structured process around having deep, productive conversations about instruction and classroom practices was lacking. Though some elements of the meeting structures provided teams the opportunity to engage in instructional conversations, frequently these conversations were neither substantive nor moved towards improving teacher practice. Though ELD strategies were surfaced during team conversations, there was a focus on the use of the ELD strategy with very little reference as to what degree students understood the subject matter content through the instruction. There was a general lack of shared understanding among grade level team members on how to effectively use instructional strategies in integrating language and content for supporting newcomer adolescent English learners. The challenge was that secondary content specific teachers, who worked with the newcomer student population, struggled with their understanding of how to integrate language development and subject matter content instruction that went beyond mere ELD strategy implementation.

DEFINING DESIRED STATE

To address these aforementioned problematic behaviors and provide an interdisciplinary team of secondary content area teachers the necessary structures and tools to have productive conversations around instruction, I intended to design an intervention that would effect changes in the following areas: 1) Teachers prioritized instruction in team meeting conversations using a systematic process, 2) Teachers deepened their knowledge and understanding of how to effectively integrate language and content in their own classroom practice in service of improved student outcomes, and 3) Teachers gained confidence in their ability to implement lessons that integrate language and content.

DESIGN CHALLENGE SUMMARY

Preparing newcomer ELs to achieve the language and learning expectations of the new California Standards does not solely rely on language specialists or English teachers; rather the development of the academic uses of language for newcomer students becomes the responsibility of every secondary teacher, especially content discipline teachers, to engage these students in meaningful language use for content specific purposes (Heritage et al., 2015). Based on the various data collected from Hamilton High School during my needs assessment, teachers who worked with newcomer student populations struggled to develop a common understanding and to enact effective language and content integration in classroom instruction. Teachers articulated various understanding and ways of implementing ELD strategies to teach their respective content that ranged from explicit writing of the *"content and language objectives during lessons"* to *"using positive encouragement instead of negative consequences."* When the teachers did include language skills in their instruction, the emphasis was mostly on ELD instructional strategies rather than how the subject matter content instruction integrated meaningful English

language development. As one teacher described her lesson (Survey, January 3, 2017), *"I am going to implement a 'microlab' activity in regards to discussing reading… a group of 4-5 students… talking about their reading in a meaningful way, with tangible results because each student also engages in a writing activity post-discussion."* Language production exercises during the lessons were often limited to basic pair share strategies, use of sentence frames, or group work configurations without intentionality behind what students were expected to say to one another and how students were going to speak with each other. In response to this challenge, my design study employed an intervention that addressed the two-fold need for teachers: 1) to acquire a systematic approach for an inter-disciplinary team of secondary content teachers to have productive conversations around instruction and 2) to better understand and effectively implement integrated language and content instruction.

CHAPTER 2: THEORY OF ACTION

INTRODUCTION

"Theories of action connect the values and intentions of leaders with their understanding of problems at hand and their knowledge of effective processes of change in given social contexts" (Mintrop, 2016, p. 76). Theories of action can be tested with evidence from diagnostic assessments, implemented change processes, and accomplished impact (Argyris, 1996). As I already discussed in the previous chapter, my intervention addressed two focal problematic behaviors:

- Despite having established team structures at Hamilton HS, teacher teams tended to circumvent instructional matters, and when they did discuss instruction, the conversations were non-substantive, episodic, and disjointed.
- While language and content integration was an instructional focus school-wide and the need to integrate language and content during instruction was recognized by the teacher team, my observations revealed that, for the majority of teachers, language and content integration was understood and practiced as the unintentional inclusion and mere enactment of ELD strategies during classroom instruction.

In the following sections, I consulted various literature to investigate the underlying factors that might cause or produce patterns that contributed to these two focal problematic behaviors. Once having gained a deeper understanding of the problem, I present my understanding of the change process that would bring about improved practices.

NEWCOMERS

I begin by illustrating the experiences of many newcomers whose learning needs are the ultimate purpose of the designed intervention. The newcomer student population has rapidly increased within the last couple of years and is expected to continually grow in the future (Goldschmidt et al., 2015; Blumenthal, 2002). Who are these newcomers?

> *"I had a friend. When we were young, it was something incredible in our lives because I had a friend who had a very similar life story. Instead of studying, we would cut lumber from very large trees. He would say, 'One day, I would love to speak English' and sometimes we would listen to music... and in our job there were young men who would focus on getting a cellphone and they would buy a memory card which would let them listen to the music they wanted to listen to... There were days that we would work together and we would hear other coworkers listening to their music, but the songs were in English. And we would say, 'It's unfortunate that we were not born in this country [referring to the US], [otherwise] we would be speaking English at this moment.' We would be able to understand that music and be able to see what they are saying... I would say to take advantage of the opportunities that they [other immigrants] have [here in the US] because there are various people; children, young people, including elders who*

would love to have the opportunities to be in this country [US]." – Marco, Newcomer Student [translated from Spanish]

In this translated excerpt, we get a glimpse of Marco's life, a 9th grade newcomer student who was the focal student of the teacher team in this study. Marco arrived in the United States from San Juan Sacatepéquez, Guatemala. Like most newcomer students, Marco recently came to the United States with very little or no knowledge of written or spoken English. Yet, children like him bring so much of their home culture and experiences into their personal narratives. Marco described his hometown as *[translated from Spanish]*:

> *"It is a small town, but they call it the land of flowers because they cultivate so many flowers there. My language is Spanish. I was born speaking Spanish and they only taught me in Spanish, but there are many different languages where I am from. From those languages, I understand a little Kaqchikel. It is only a few words that I understand."*

Like Marco, many newcomer students arrive as multi-linguals—they not only speak the primary language prevalent in their country, but also have some knowledge of the various dialects that entwines the rich linguistic tapestry of their cultural heritage. Most first generation immigrant newcomer students like Marco come with unique strengths and challenges along their often-untold journeys to the US. Marco recounted his immigration story as *[translated from Spanish]*:

> *"I am going to turn 18 on Saturday. I came [here in the US], well, I left from my house March 23rd. The journey was long and the story is somewhat long. However, from all of that, the main idea is that in April [2016], I entered the United States. I stayed in a shelter in Texas and they transferred me here to this city, which is San Francisco, California. It was almost toward the end of May when I started school. The last grade that I completed over there [Guatemala] is… I actually don't really remember… sixth grade or fifth grade something like that."*

As Marco's experience illuminates, newcomer students often face discontinuities in their formal schooling compared to their peers (Roberge, 2002). Adolescent newcomer students experience this disruption in the forms of a new schooling system, adjusting to varied curricular demands, language instruction, and several relocations before finding a stable residence. Command of the primary language is reliant upon students' prior formal schooling experience. A student's lack of primary language literacy requires a much larger lift for newcomer students to learn a second language since proficiency in a primary language facilitates the acquisition of a second language that includes basic decoding, syntax awareness, and text schema (Roberge, 2002; Diaz et al., 2008).

UNDERSTANDING THE PROBLEM

Shifting from the students to the adults, in the following sections I explain the various significant factors that contribute to the lack of depth of conversations around instruction during team meeting. These factors include: the absence of systematic learning that utilizes pre-existing school structures and assets for instructional improvement, the lack of focus surrounding matters of instruction, and insufficient awareness and practice around content and language integration.

To better understand this set of problems, I explore literature that discusses the challenges of focused instructional inquiry in teacher teams, secondary content area teacher challenges in ELL instruction, and language and content integration.

CHALLENGES OF FOCUSED INSTRUCTIONAL INQUIRY IN TEACHER TEAMS

First, I describe what contributes to the lack of focus surrounding matters of instruction for teacher teams. This issue is related to teachers' capacity to manage time and resources, to establish structure and planning, to engage in instructional talk, and to avoid distraction from non-instructional tasks.

Time and Resources

In small schools with limited staff capacity, as in the context of this study, teams of inter-disciplinary teachers are often assigned to handle the resolution and planning of both administrative/logistical tasks as well as student behavioral and socio-economic support interventions. In a survey given to teachers, regarding issue of successful team tasks, teachers felt that "*there is a specific goal we [teachers] support each other to that goal… by specific, I don't mean language and content integration, but instead, create a regular assessment that evaluates language development… but we don't have much time for these specifics*" (Survey, January 3, 2017). Though teachers' willingness to participate and engage in collegial conversations is fundamental to collaborative inquiry (Little et al., 2003), it alone is insufficient. Time is the most valuable commodity of teachers in a school and effective collaborative inquiry requires this precious commodity. As one teacher described, "*Sometimes I feel unprepared to share or participate because of an overwhelming workload… I can't think past what we're doing this week in each of the three classes*" (Survey, January 3, 2017). The ability to maintain and commit the time for collaborative inquiry around instruction was very difficult and often required resources and support: "*The most challenging part is trying to be present when you still need to prepare for a class*" (Survey, January 3, 2017). Moreover, teachers' reflective process related to instructional decisions and student learning often occurred in isolation from professional peers and in siloes from other support structures (Nelson & Slavit, 2008). This contributed to teachers' preference to work individually, as articulated by two teachers: "*Occasionally, I prefer to prep my classes than to meet due to the limited time I have to prep*" (Survey, January 3, 2017) and "*More time—time to reflect in GLT (grade level team) instead of more meeting stuff. I need more to think about what worked and what did not*" (Survey, October 11, 2016).

Structure and Planning

In a conversation with a veteran teacher who helped plan team meetings, she explained that one of the struggles for the team was the size of the group. As one teacher mentioned, "*The most challenging is getting accustomed to working with a larger group than last year. We currently have a team of ten and last year we were a team of four*" (Survey, January 3, 2017). Additionally, in a survey conducted as part of the needs assessment (see Appendix A), seven of the ten teachers rated team meetings a 2 or 3 on a scale of 1 to 5—5 being extremely well—when it came to how well team meetings and structures in the school were working. Engaged in the cycle of inquiry, secondary level teacher teams were often hindered by content related barriers

when they attempted to construct a shared vision of teaching and learning (Nelson & Slavit, 2008). Teacher teams concerned with researching, identifying, and implementing instructional practices tended to orient themselves toward accountability routines that prioritized the documentation of time and artifacts through set agendas and minutes. As one teacher put it, *"I like that there are set agendas for each meeting so that everyone knows what our goal is"* (Survey, January 3, 2017). However, planning and structuring the dialogue and reflection within meetings became difficult. As one teacher noted, *"I'm worried that we don't really have a direction [about how to move the conversation forward during meetings]. The meetings [discussions] don't feel that substantive"* (Interview, October 11, 2016). Consequently, Gallimore et al. (2009) summarize their observations of department or grade level meetings this way, *"Teaching and learning were seldom on the agenda and continuous improvement was rarely practiced."* A teacher in the focal school raised a similar concern, *"Sometimes I feel that we are trying to rush through certain topics, like 'rigor,' but there is little training around it and not very much follow-up with the work"* (Survey, January 3, 2017). This is linked to teachers' capacity to engage in a meaningful system of "instructional talk" (Troen & Boles, 2012).

In addition to teachers' individual knowledge, skills and dispositions, high quality instruction relies on the competence and attitudes of each individual teacher that must be brought together in an organized, collective endeavor (Stoll et al., 2006). Literature on professional learning community (Stoll et al., 2006; Louis & Kruse, 1993; Blankstein 2010; Westheimer, 1999) assumes that the beliefs, values, and norms that contribute to the culture of the organization may become universally shared. The absence of a core of shared values produces misunderstandings and sometimes conflicts that may lead to interpersonal distrust and a sense of inefficiency of the work (Louis & Kruse, 1993). Diagnostic conversations with teachers at the focal school seemed to confirm this sentiment, *"I have not felt very successful this year… I don't feel like I'm growing…. Continuing to learn with others who are at different levels of understanding [is challenging]… We are all at different levels, so I am often frustrated with a feeling of wasting my time…"* (Interview, October 11, 2016).

The challenge for schools that share a strong motivation and urgency around learning new teaching practices and improving learning for students is the lack of individual and collective agency, or control over the school conditions affecting the learning of both students and adults (Blankstein, 2010). Effective teamwork is challenging; often absent are the necessary components of shared values, common vision of teaching and learning, and opportunities within meetings for structured dialogue and reflection. Thus, promoting instructional discourse within teacher teams requires these elements to be present.

Instructional Talk

Informal discussion of curriculum implementation, a recounting of a teacher's experiences with delivering particular lessons, informal talk about children's experiences with curriculum, and discussions of children's learning and behavior is how teachers often conduct discussions around teaching and learning (Troen & Boles, 2012; Little et al., 2003). In the rounds of needs assessment that I conducted, I would encounter teachers sharing their experiences with work on instruction this way: *"I liked the meeting where we all brought activities we have done in class and did a gallery walk… these are the types of activities I need"* (Survey, January 3, 2017). Another teacher surfaced that *"team meetings have been productive when it comes to sharing strategies and sharing feedback with each other on our teaching practices"* (Survey,

January 3, 2017). Lastly, when asked what aspects of the team meeting and structures they find particularly helpful, the same teacher responded, *"I also feel that our team members' enthusiasm and similar views of students creates a positive team environment"* (Survey, January 3, 2017). However, these typical conversations lack the "critical dimension" (Troen & Boles, 2012) of examining curriculum and engaging teachers in observation; critique, and discussion around specific practices based on evidence of student learning (Little et al., 2003).

Troen & Boles, (2012) point out that engaging in systematic and meaningful "instructional talk" is not explicitly addressed as part of teachers' professional competence. Inability to engage in a systematic process of "instructional talk," however, prevents teachers from capitalizing on team meetings and other team interactions to effectively and substantially improve curriculum and instruction. As one teacher described, *"When we are making large group decisions… we just do open ended asking questions of each other… I don't feel like I get much out of it and nothing really sticks"* (Survey, January 3, 2017). Often missing is a shared language (Louis & Kruse, 1993; Westheimer, 1999) among teachers in a team that speaks to the precision required to talk about the complexities of teaching, the ability to distinguish one practice from another, and the integration of various practices into "distinct and sensible perspectives" (Troen & Boles, 2012). Variations in teacher perspectives about specific teaching practices or instructional strategies are common, as evidenced from collected teacher surveys in Hamilton High School. One teacher described her understanding of teaching practice as, *"One thing I have implemented in the class is trying to have a clear language and content goals for each lesson"* (Survey, January 3, 2017); whereas another teacher described his teaching practice as, *"Building community and strengthening my relationships with students"* (Survey, January 3, 2017).

Engaging teachers in sustained "instructional talk" as a team requires them to have a common language in order to anchor their discussions on teaching and learning. Building teachers' competence in "instructional talk" requires opportunities for teachers to exercise their skills in observing, critiquing, and articulating specific classroom practices that evidence student learning.

Predilection for non-instructional tasks

In the Hamilton school context, there are typically two types of work that the inter-disciplinary teacher team is accountable for: logistical management agenda items and instructional agenda items. Teacher teams often experience success and engage in mutual accountability for non-instructional tasks such as field trips and student socio-emotional related issues because the more immediate, concrete consequences of such tasks are easier and transient compared to the more difficult and sustained work around instruction (Troen & Boles, 2012). As one teacher in the school noted, *"I think that the meetings surrounding our 9/10 field day were productive. Although the student participation wasn't what we hoped, I think that the planning of the event went well"* (Survey, January 3, 2017). Meanwhile another teacher added, *"I found our meetings about the Field Trip or Award Assembly planning to support students helpful"* (Survey, January 3, 2017). If teachers are to engage together in the difficult work of instructional improvement, the school itself must organize for it (Little et al., 2003).

Teacher teams typically are reluctant to engage and implement instructional agenda items due to a lack of experience, an absence of guidance and evaluation, and vague accountability standards (Troen & Boles, 2012). More frequently however, what ensues in everyday practice

are teachers' avoiding the responsibility of holding each other accountable for completing instructional tasks. As observed in a team meeting observation, the team agenda allocated twenty minutes to discuss final logistics for their school event on October 13th, while twenty minutes were dedicated for a learning walk debrief conversation. During this meeting, action steps were noted and assigned for the October 13th school event (Meeting Observation, October 6th, 2016):

- *Gary will create schedule to pass out to students and communicate with Mr. Reed.*
- *Allie will send email to staff.*
- *Ellen will talk to Ms. Sanders.*
- *Allie will ask Cory for basketball to borrow for the day.*
- *Attendance will happen after school as a group.*

The discussion of the upcoming school event went over the allocated twenty minutes listed in the agenda; this left ten minutes for the learning walk debrief conversation. During those ten minutes, some teachers made very brief comments since they did not have their notes from the classroom visit to fully engage in the learning walk debrief: *"I don't have my notes with me."* (Meeting Observation, October 6th, 2016).

Additionally, evidence from meetings demonstrated that the reliance on non-instructional tasks was a byproduct of the fact that this school lacked a structure for systematic learning. During one of the meetings in September, the order of the agenda items included: fifteen minutes for small teams to *"decide on whether to do partner learning walks, mini-rounds, or video and to discuss what feedback partners are looking for;"* then ten minutes were scheduled to *"check-in about the October 13th school event'"* and finally thirty minutes were designated for collaboration period among teachers to *"get together with a partner or a small group to work on a piece of curriculum"* (Meeting Observation, September 29th, 2016).

Therefore, promoting a focused conversation for teacher teams around instruction requires distraction from non-instructional tasks that could be mitigated through a structured, systematic approach to team meeting conversations. Equally important is establishing a shared responsibility and accountability among teachers towards improving instruction for students based on classroom evidence and student performance.

SECONDARY CONTENT AREA TEACHERS' CHALLENGES IN ELL INSTRUCTION

To better understand instructional challenges addressed by my intervention, I consulted the knowledge base on learning academic language, language proficiency, instructional modifications, second language acquisition, language utility across disciplines, and teacher preparation.

Academic language learning versus English language proficiency

While knowledge about the content to be taught is necessary, expertise in the discipline alone is inadequate for good teaching (Fang & Schleppegrell, 2008). The constructs of English language proficiency and academic language learning speak to different linguistic competencies and are assessed differently (Gandara & Contreras, 2009). Academic language, both receptive and productive, has distinctive features and meanings that differ from informal spoken interaction and can also vary across disciplines. The difference between conversational versus academic English is that the former tends to be acquired rapidly, whereas the latter is developed

only over an extended period of time (Roberge, 2002). The academic uses of language—including the meaning of individual words—need to be explicitly taught for newcomer students to fulfill both the discipline specific discourse requirements privileged in academic settings, and to understand the materials where they are often encountered, such as history textbooks or mathematical word problems (Janzen, 2008). Merging English language development with content instruction assumes that this type of learning builds on both, academic language and English language proficiency. Developing academic language requires students to read content specific literature or text, write in a distinct style of composition, speak using particular terminology, and listen for unique subtleties. English language proficiency however is often assessed and determined by how well a student could demonstrate their ability to read, write, speak, and listen in formal or informal English. An assessment such as the California English Learner Development Test (CELDT), for example, serves to provide a level of English proficiency for a student's performance in reading, writing, speaking and listening in English. "Teachers who believe that ELLs can learn subject matter content while acquiring English are much more likely to establish high expectations for ELL students than those who do not" (Heritage et al., 2015). However, there is a risk during content instruction to neglect language development, since many teachers hope that language production naturally occurs during content area lessons (Gersten & Baker, 2000) or merely assume that features of the English language would become transparent during instruction for English learners (Gandara & Contreras, 2009).

Effective content instruction for English learners would therefore necessitate opportunities within the lessons to acquire academic language and to practice while learning the aspects of the English language.

Instructional Modifications

Instructional design and intent of the lesson do not fully account for the actual lesson implementation in the classroom. The discrepancies between the design and intent of the lesson to how the lesson actualized in the classroom are often referred to as "mutual adaptations." (Little et al., 2003; Borko, 2004; Newmann et al., 2001; Finley, 2000) Such "mutual adaptations" in teachers' lessons often have consequences for students that range from restricted opportunities to practice extended academic talk, limited opportunities to co-construct content understanding, and marginalized roles within classroom settings (Verplaetse, 1998). Common are the ways in which content teachers feature second language support mostly through unnecessary translation where as long as there is some content involved, teachers can consider their practice within a language driven perspective (Banegas, 2012). In other words, teachers often consider that having students translate words they do not know in a discipline specific text would suffice as supports for students' English language development in content instruction. Moreover, teachers call on English learner students who they perceive as having lesser developed English during class instruction less frequently than students who display more English fluency with fewer open-ended, difficult questions. Teachers resort to increased use of directives, decrease use and frequency of high-level cognitive questions, and encourage talk that is primarily procedural and not content focused (Verplaetse, 1998). Such modifications in instruction leads to reduced academic rigor.

In rounds of needs assessment, when teachers were asked about what had been most challenging during the year, one teacher mentioned (Survey, October 11, 2016): *"Making activities newcomer friendly and content accessible"* has been most successful in her classes so

far for this school year. When asked to articulate what growth, success, or accomplishment in instruction they are most proud of, one teacher replied, *"Starting to modify some curriculum to keep students engaged and feel like they are able to answer questions"* (Survey, October 11, 2016) while another teacher responded to the same question with, *"I'm proud when students are eager to demonstrate their new skills—such as raising their hand to answer questions"* (Survey, October 11, 2016). Hatch (1992) refers to such teacher modifications as "benevolent conspiracy" intended to protect English learner students from any unnecessary embarrassment. But these modifications are also related to teachers' concern with the amount of time it takes English learner students to respond to teacher-student interactions, the amount of curriculum they need to cover, the underestimation of English learner students' language competencies and ability to produce extended utterances, and their concern that English learner students may be "lost" or "confused" during classroom instruction (Verplaetse, 1998).

  Thus, effective instruction for English learners considers the implications of instructional modifications; the evidences of students' needs are used in decisions to modify instruction rather than perception of students' English language level.

Understanding second language acquisition

  Nothing in schooling is more important than the quality of teachers, especially for English learners. However, there are often insufficient numbers of second language and bilingual educators in schools to serve newcomer students (Batt, 2008). In a survey portion of the needs assessment conducted, six of the ten teachers in the team mentioned that they either had an English Learner authorization, Cross-cultural, Language and Academic Development (CLAD) or Bilingual (BCLAD) certification. Additionally, content area teachers of English learners are often unprepared, lack the knowledge and skills in educating English learners, have insufficient training and garner limited support for instruction, and lack an understanding of diversity or multicultural education (Gandara & Contreras, 2009; Batt, 2008). Citing group work as one of the ways to promote language development in a classroom of English learners, one teacher commented that part of her struggle in her class was *"Differentiating within [the] structure of group work, how to support those few students that really don't understand and aren't improving"* (Interview, October 11, 2016). To effectively teach English learners, an understanding of how students learn a second language is critical; but most teachers have not been trained in second language development (Gandara & Contreras, 2009; Fillmore & Snow, 2000). Consequently, some research has shown that the type of language instruction that English learner students are exposed to—as discussed in the previous section on instructional modifications—does not allow them to achieve high levels in an English curriculum (Gandara & Contreras, 2009). Lastly, content area teachers unfamiliar with stages of second language development are unaware of the time it takes for ESL students to adapt to the constant flow of rapid English content discourse in their classrooms, and are unprepared to assess what English learner students know and understand during class discussions (Verplaetse, 1998). As one teacher described, *"The most challenging so far is finding the right levels of language demands for all my students when designing curriculum"* (Interview, October 11, 2016).

  To be effective, instruction for English learners necessitates a teacher to have, at a minimum, some basic understanding of how students acquire a second language. It also means developing ways for a teacher to monitor and assess what students know and understand during class instruction

Emphasis on English language utility across disciplines

Two schools of thought provide varying perspectives regarding how English language is utilized across different content disciplines. In one perspective, Fillmore & Snow (2000) argue that the reason for weak instruction in English usage in content instruction is due to discipline specific content area teachers who are inadequately prepared to explicitly teach English learners about language and its utility across genres and discipline. In one of the needs assessment interviews for example, a science teacher mentioned how *"as a new Newcomer teacher, I am still not satisfied with how I'm supporting students to learn [science] content with complex vocabulary"* (Interview, October 11, 2016). Science teachers are not typically trained to explicitly teach how the English language is used or how it works in scientific articles or texts. Even though pre-teaching complex vocabulary could support students' access to science literature, pre-teaching vocabulary alone is inadequate for students to learn the content in the literature. Scientific writing often utilizes the passive voice, so students would benefit from learning the structure of passive voice writing in order to better access the content but also apply this learning to other disciplines.

Furthermore, there is a general consensus that English learner students need appropriate feedback on their formal English usage as they progress in school to further their oral and written academic language development. Unfortunately, content area teachers often lack a coherent system for identifying errors and providing specific feedback (Harper & Jong, 2004; Gersten & Baker, 2000) because they are not typically trained in how to explicitly teach English language (Gandara & Contreras, 2009). A math teacher at Hamilton High School described how despite changes in her own practice in terms of providing *"more structured classroom, intentional systems and clearer expectations for everything… which has led to a more academically focused spaced, rather than behavior management… I still struggle with language integration especially in Newcomer Algebra where the class is less heterogeneous in terms of English language ability"* (Survey, January 3, 2017). Part of the teacher's struggle in integrating language in their math class might stem from their inexperience with developing routines to explicitly teach language development in math class, despite having created an academic learning environment for students with intentional systems and clear expectations.

In contrast, Hirsch (2003) asserts that English learners' failure in discipline specific classes is partly due to how content area teachers overlook the important aspect of literacy known as *domain knowledge*: Secondary teachers assume that students can apply all-purpose cognitive skills and critical thinking strategies to unfamiliar content within any subject matter discipline. In other words, when a student has learned to analyze literature in an English class, a student is expected to also be able to apply that analytic skill to history texts. However, teachers often ignore that literary analysis has distinct content expectations in terms of elements of literature such as allegory, imagery, point of view and specific composition format. On the other hand, historical analysis has its own unique constructions and must include chronicled facts that represent socio-political contexts over time. However, as teachers of specialized disciplines, secondary school teachers are appropriately positioned to help students recognize the unique ways language works in their content areas (Fang & Schleppegrell, 2008). When asked about changes they have seen in their own practice, a social studies teacher described how her *"students have more opportunity to practice and apply language [during social studies class] so that it really sticks… as opposed to getting 100 new words a day…I am getting better at creating*

activities [about social studies content] where students have to independently produce English [to discuss the content], instead of writing and using a translator…" (Survey, January 3, 2017)

In all, effective instruction for English learners should consider the explicit teaching of cognitive thinking and critical thinking strategies as it pertains to a content specific discipline, the explicit teaching of the functional uses of language (language functions and meaning) applicable across disciplines, or the provision of appropriate and structured feedback to students on their language development and growth.

Teacher preparation and skills

A commonly mentioned challenge for secondary teachers teaching English leaners is the language and cultural barrier. This translates to teachers' difficulty to keep newcomer students absorbed and challenged with the academic content appropriate to their English language skills because these students significantly vary in their academic skills, English proficiency, educational background, and primary language proficiency (Gandara et al., 2005). In their investigation of teacher preparation in California, Gandara et al. (2009) have found that "teachers' sense of their own ability to teach English learners was associated with their level of specialized preparation and skills: teachers with bilingual teaching credentials were most confident, those with some training in cultural and linguistic diversity felt moderately capable, while those without appropriate specialized credentials felt the least competent." In a similar study of 5,300 California teachers, participants cite that the skills to successfully instruct English learners was an area in greatest need of support. Findings suggest that teachers' attitudes toward their ability to teach English learners effectively predicts successful instruction in their classrooms; more preparation for teaching English learners yield increased teacher confidence (Gandara et al., 2005).

In a survey portion of the needs assessment conducted, all teachers said they had a California single subject teaching credential for secondary teaching and at most six teachers had an authorization or credential for teaching English learners. Additionally, most of the training in instructing ELLs, mentioned by respondents, was exposure to a few graduate school courses, school level staff professional development, the intermediary organization professional training, individualized coaching, or district level professional development. However, to what degree of language development pedagogy or second language acquisition theory was provided in these trainings were unknown. As one teacher at Hamilton High explained, *"PDs have given specific strategies but often lack the instructions for implementation"* (Survey, January 3, 2017).

Increased confidence of teachers to enact effective instruction for English learners is associated with more training and a better understanding of students' academic needs. Teachers should consider appropriate supports that commensurate with students' English language skills and proficiency level.

LANGUAGE AND CONTENT INTEGRATION

Finally, I assert that secondary content area teachers' struggle around content and language integration stems from a lack of practice and understanding of what it means to "integrate" language and subject matter content during instruction. To better understand this issue, I consulted the literature on teacher attitudes and beliefs surrounding language and content instruction, continuum of integrating language and content, the process and product dichotomy

within language and content instruction, modulating language and content, and the difficulty in changing instructional practice.

Teacher attitudes and beliefs surrounding language and content instruction

In a fundamental way, teachers' attitudes and expectations about their teaching form in reference to their own experience as a student, which in turn is passed on to their own students (Diaz et al. 2008). However, it is flawed to assume that simply because teachers and students share a common linguistic and cultural identity that teachers would easily recognize and intuitively support language minority children. In a study regarding the challenges of teachers in working in bilingual education programs (Diaz et al., 2008), teachers express that their teaching would improve if their level of understanding of the English language was improved through further language training. Teachers did not, however, express this optimism for the "theoretical training" in second language and bilingual methodology, even for those with limited skills and knowledge of it. This suggests that teachers found learning more about language forms, language meaning and language function to be more beneficial to their everyday teaching practice than theories about how students acquire new language and theories about language learning in general: Teachers prefer learning that is practical instead of conceptual. From the needs assessment, one teacher noted, *"I like PDs where I am given tangible things to use in the classroom right away. It works best for me when we spend a brief time on theoretical approaches, and then move right into practical approaches. As a new teacher, I need things I can use in the classroom now"* (Survey, January 3, 2017).

Moreover, teachers in the same study (Diaz et al., 2008) show interest in practical knowledge on their specific subjects and rely on their own experience, their colleagues' experience, and through continuous self-learning. In describing resources at Hamilton High School used to improve their practice, one teacher said, *"Collaboration with Allie, Jade, and Justine mostly -- using our shared experience with students to best support them."* (Survey, January 3, 2017). Meanwhile, a math teacher noted that, *"More insight into students' backgrounds - I'm learning more about students from the different teachers that teach them"* (Survey, October 11, 2016). Additionally, though teachers in the study (Diaz et al., 2008) view bilingual learning to be positive, they prefer to teach in "traditional models," arguing the importance of leveraging students' primary language (L1) in order to acquire the content of the lesson. In other words, teachers like seeing other colleagues teach, think that extra materials and resources adapted to their students' levels would help, and that speaking to students in their L1 would more likely help students grasp the content. As one teacher responded from the needs assessment, *"I thought when we reviewed video of our colleagues' [teaching their] classes and gave/received feedback"* was a time when team meetings had been productive (Survey, January 3, 2017). Meanwhile, when asked about what has been most helpful in their practice, another participant wrote, *"Example lessons and differentiated activities are really helpful because they can be applied to different content,"* (Survey, January 3, 2017). Lastly, one teacher described a practice that has been most successful for her as: *"Primary language support is very useful in my opinion to make sure students understand [the content]"* (Survey, October 11, 2016).

Diaz et al. (2008) echoes Gandara et al.'s (2005) findings from their work with secondary teachers; they tend to want more time to observe and collaborate with other teachers and to learn the fundamentals of their students' first language because they felt unable to communicate with their English learner students about the academic content of the class. Additionally, Grabe &

Stoller (1997) argue that in content-based instruction programs, efforts to introduce language instruction across the curriculum in the content areas all have met with some resistance because many subject-area teachers want to maintain strong control over their particular courses and content.

Thus, language and content integration considers the following: teachers' attitudes and beliefs are more inclined towards the practical knowledge (through the use of strategies) than the conceptual approach of language learning (how language is acquired or learned); teachers' tendency to learn from others' practices (how others use the strategies); teachers' appreciation for extra materials and adapted resources; and teachers' perceptions of students' primary language (L1) as a means to ensure students' content understanding.

Continuum of Integrating Language and Content

The concept of language and content integration assumes that all content is learned through language and that a focus on language skills will improve content learning (Grabe & Stoller, 1997). However, defining content and language from the point of view of integration is debatable (Mohan & Slater, 2005) since there is no single pedagogy or model for integrating content and language (Banegas, 2012). Rather, there are two perspectives that researchers have proposed regarding the conception of integrating language and content: a content-driven versus a language-driven approach. Some researchers who advocate a content-driven approach have argued for the difference between subject-specific and general discourse within content instruction (Bentley, 2010), meaning the distinction of engaging in classroom discussions that use precise terminology and academic language in a particular discipline versus the use of formal or informal English to engage in everyday talk such as asking questions or clarifying statements. They have also argued that content needs to be seen as beyond knowledge acquisition (Coyle et al., 2010); this means content should not only be acquired knowledge, but it should also be treated as applied knowledge to extend thinking and to create new ideas. Meanwhile other researchers who argue for a language-driven approach have expressed how language may be viewed as a scaffolding tool, with its own content as a system, which can be used to express functional meanings (Banegas, 2012), or a functional view of language that pays close attention to how a language works within a curricular content where content is the meaning of a discourse, such as a mathematics discourse, while language is the wording of a discourse (Mohan & Slater, 2005). One way to think about language driven approach is to see the use of teaching aspects of language, such as the appositive, in order to explain its function in a social studies class; in the case of the appositive, it can be used to define a concept in a sentence or to refer to an even more specific component of the historical event in the sentence. Another way to understand language driven approach is to think of mathematical expressions and equations as a way to think, speak or write like a mathematician (the discourse) as a means to engage with other mathematicians, while math symbols and specific words such as "per", "is" and "twice" is the language used to express the mathematics.

Met (1999) presents a continuum of language-content integration (Figure 2.1 below) that has been useful in describing the various curricular models—such as bilingual education, language based projects, and interdisciplinary module approach to name a few—that have been explored regarding language-content integration.

Diagram 2.1: Continuum of language-content integration (adapted from Met, 1999)

Content Driven ——— **Language Driven**

How does content relate to L2?
Content is taught in L2 ——— Content is used to learn L2.

What is prioritized?
Content learning is priority. ——— Language learning is priority.

What is less prioritized?
Language learning is secondary. ——— Content learning is incidental.

What determines the course goals or curriculum?
Content objectives determined by course goals or curriculum. ——— Language objectives determined by L2 course goals or curriculum.

Teacher or student driven?
Teachers must select language objectives. ——— Students evaluated on content to be integrated.

How are students evaluated?
Students evaluated on content mastery. ——— Students evaluated on language skills/proficiency.

Total Immersion | Partial Immersion | Sheltered Courses | Adjunct Model | Theme-Based Courses | Language Classes

This continuum suggests that in language-driven approaches, content may be seen as a mediating tool for language learning, and conversely, content-driven approaches utilize language as a mediating tool for content learning (Banegas, 2012). A sheltered course approach, typical of most secondary classroom instructional settings, locates somewhere between the content-driven and language driven approaches since this instructional configuration consists of a content course taught by a content area specialist in the target language, in this case, English (L2). Thus, this continuum model implies that an approach to deal with content and language on equal terms is subjective and relative to the instructional model components enacted by the teacher and the students. However, what is missing from Met's continuum are his prescriptions for the types of mental models and learned practices that teachers would need to develop and apply in order to make sound instructional decisions; sound decision making weighs the degrees of emphasis that should be put on either language or content to achieve balance of language and content instruction for newcomer student populations. Additionally, Met's continuum does not consider students' reaction to the instruction and how teachers respond to meet students' needs which heavily influences the treatment of language and content in their instruction.

The Process and Product Dichotomy in Language and Content Instruction

There is a lack in the professional knowledge base, with little empirical evidence, on how to go about the modifications that need to be made so that teachers can provide English learner students with instruction that is comprehensible yet still cognitively demanding (Goldenberg, 1996; Gersten, 1999). Part of understanding the dilemma that teachers face regarding these

instructional modifications involves examining the patterns of practices that stem from teachers' struggle with integrating language and content within their instruction. In a large scale research study examining instructional problems facing teachers of English learners (Gersten, 1999), teachers often talked about the importance of the process, such as encouraging students to express their ideas, or analyze and summarize concepts. In everyday teaching practices, however, these teachers were often more concerned with receiving written student work that is grammatically correct. Also noted is how lesson designs that either encourages one-word recalls or longer student responses have a strong impact on the likelihood of actual language errors and for implicit or explicit corrections to transpire (Dalton-Puffer, 2011). Competing instructional objectives, as to whether to stress content over form or form over content, influence teachers to rely on instructional practices that are less risky and least challenging in order to improve student produced artifacts (Gersten, 1999). For example, a social studies teacher could perceive a simple turn and talk conversation asking students to identify items in a photograph using explicit sentence frames to yield a better student performance quality rather than a gallery walk asking students in triads to debate about the arguments and evidence presented in each of the posters they visited.

Findings from studies conducted within content and language integrated learning classrooms show that the extent to which learners are required to articulate complex subject matter, either orally or in writing, is contingent upon the decisions and traditions of content-subject pedagogies (Dalton-Puffer, 2011). The ways in which students are to articulate and express their learning (the process) is weighed against teachers' desires to ensure accuracy in students' work (the product). In classroom settings, the tension over process and product often manifests as: teachers accepting simplistic indications of success through one word responses rather than promoting deeper discussion through complex activities or texts; teachers narrow the curriculum to vocabulary development, grammar and spelling as perceived language integration within content instruction; teachers enable students to produce acceptable written products through copying; teachers rely on literal, low level questions and vocabulary drills; and teachers normalize work patterns and processes that contribute to a substantial reduction in students' intellectual efforts to accomplish a meaningful task (Gersten, 1999).

Language and content integration accounts for the degree of accommodations within the instruction to support students' level of English proficiency without a watered down version of the content. It also includes the ways in which teachers weigh the tradeoffs between how students are to articulate and express their learning versus teachers' expectations around student-produced artifacts.

Modulating language and content

Similar to the contention between language form and content, the modulation of language and content demands has been suggested as a high level instructional strategy (Gersten & Baker, 2000); that is to intentionally vary the cognitive and language demands during English-language content instruction due to the inverse relationship between the competing cognitive demands of the challenging content and complex linguistic demands of the subject matter (Dutro & Moran, 2003). For example, when cognitive demands are increased, language expectations are simplified, and teachers may accept short responses in English in order to assess for content. Meanwhile, for another lesson, using familiar content to explicitly teach and practice the essential language skills, the content demand is lowered so students can attend to the language

learning such as producing extended responses. (Dutro & Moran, 2003). In other words, cognitive demands may intentionally be reduced so that students can comfortably experiment with extended English-language production to talk more about the content. However, there is a risk in lessening the demands of the content to accommodate the language level or when emphasis on content tends to dominate while language demands tend to be curtailed because, for some teachers, the priority of content instruction is to teach the knowledge and concepts of the discipline (Dutro & Moran, 2003). Much like studies surrounding modifications for English learner instruction, this proposition for language and content modulation needs further empirical support (Gersten & Baker, 2000) and effective implementation of the strategy remains unclear.

Effective instructional practices for English-language learners, such as the modulation of language and content, do not clearly articulate the important distinctions involved when language use is the major goal and when cognitive or academic growth is priority (Gersten & Baker, 2000).

Difficulty in Changing Instructional Practice

Gersten (1999) provides three reasons why teachers often retreat to ineffective behaviors and teaching practices when attempting to integrate language and content in their instruction for English learner students. The first reason is teachers' desire to experience some semblance of success (Gersten, 1999). Potential failure and unsuccessful attempts to push and challenge students can be circumvented by providing less challenging questions with limited answers (Verplaetse, 1999), implementing activities that can be quickly accomplished, and the use of drills and review as a way to realize mastery of the content (Gersten, 1999). When describing growth in her instructional practice, one veteran teacher at Hamilton High School said, *"I'm starting to modify some curriculum to keep students engaged and feel like they are able to answer questions"* (Survey, October 11, 2017). Meanwhile her colleague mentioned the valuable supports for students in her class as, *"Translating the handouts in their languages so they get it [the content]"* (Survey October 11, 2016) As seen from the excerpt, teachers default to primary language (L1) translation because there is a concern that since English is the learning medium for the subject matter content, it would affect the English learners' knowledge, skills and understanding of the content. This fear that their students have reduced subject matter competence can result from either as a result of students' imperfect understanding of the content or the tendency of teachers to preempt this problem and simplify content (Dalton-Puffer, 2011).

A second reason stems from teachers' challenges in helping students to develop the requisite skills and abilities in the absence of guidelines or adapted curricula for teaching reading in their content classes (Gersten, 1999). Modulating the content and language demands on tasks requires sophisticated skills in planning that many teachers are not equipped to tackle (Gersten, 1999). When asked about her challenges, an English teacher mentioned, *"I think we need more time for individual/content-partner planning [for curriculum]. I find myself doing all of this [by myself] on the weekends"* (Survey, January 3, 2017). Such adaptations in the curriculum requires complex skills, such as selecting of key concepts in the unit of study, or encouraging students to learn from each other by using and structuring cooperative student groupings with mixed levels of English proficiency (Gersten & Baker, 2000). As one teacher revealed from the needs assessment, *"Sometimes I feel unprepared to share or participate because of an overwhelming workload [of developing materials] and I can't think past what were doing this week in each of the three classes."* (Survey, January 3, 2017). Her colleague further added, *"Other lessons*

required more time to prepare, which is not ideal for a teacher who needs to prep for 3 different classes.” (Survey, January 3, 2017). The tasks of developing these materials can be overwhelming and not all teachers have the time or the skill to perform these tasks (Batt, 2008). One teacher exclaimed, *“More time! We need more time to do medium and long term planning. We can't get ahead of the new curriculum we are creating!”(Survey, October 11, 2016).*

Finally, the third reason is teachers' sense of distance between their students and themselves (Gersten, 1999). Students' reticence in expressing themselves in a new language makes it tempting for teachers to provide simple questions with clear right or wrong answers (Gersten, 1999), thereby providing more opportunities for students to respond accurately. Teachers frequently express uncertainty as to whether students understand what occurs during class instruction (Verplaetse, 2000). A math teacher at Hamilton High expressed her uncertainty as, *“What can I do with students who have very low level in math?”*(Survey, October 11, 2016) Related to this sense of distance is what Nieto (1996) calls the "fear of naming"—reflecting the desire of teachers to maintain the illusion of egalitarianism through their teachings despite the possible contradictions to students' daily lived experiences and a disconnect from students' identities and culture (Janzen, 2008). One teacher posed the questions, *“What is the pathway for a newcomer student? What are they working towards? How do we let them know so they don't get discouraged and drop out to work or give up on college?”(*Survey, October 11, 2016) while another teacher stated, *“I'm wondering whether or not it is my fault--versus student apathy--when the students are not paying attention in class”*(Survey, October 11, 2016).

Language and content integration is about recognizing and mitigating teachers' bias against students' potential for failure in the interest of demonstrating any form of student accomplishment; acknowledging the challenges of adapting curricula for English learners with varied language proficiency; and moving towards a better understanding of students and their needs.

S<small>UMMARY</small>

In summary, the lack of focus regarding matters of instruction, nonspecific standards for accountability, and unavailability of guidance and evaluation makes implementing an instructional agenda during team meetings challenging for teachers (Troen & Boles, 2012). This is compounded by the inclination of teacher teams to orient themselves to accountability exercises that heavily rely on set agendas and protocols but never go beyond superficial talk about instruction (Little et al., 2003). Quite frequently, this leaves limited or no time for reflective "instructional talk" (Troen & Boles, 2012) that explores the critical dimensions of curriculum and teachers' work grounded in evidence of student learning (Little et al., 2003). Also, opportunities to deconstruct lessons and learn about changes or modifications from intended lesson plan to the actual process of lesson implementation are rarely surfaced or socialized due to teachers' inability to organize for it (Little et al., 2003). Additionally, the minimal awareness and practice around content and language integration for teachers can be attributed to the unpreparedness, under-confidence and limited support teachers have received (Gandara et al., 2005; Gandara & Contreras, 2009; Fillmore & Snow, 2000). Often missing among teacher teams is a shared understanding, a common analytical language and opportunities for deeper conversations around their instructional practice. These are critical components to consider since there are no prescriptions about how to attain a balanced treatment of language and content during instruction that accounts for linguistic minority students' needs. Although

elements to consider are named along the language driven and content driven approaches (Met, 1999), how to go about deciding the degrees of language and content emphasis for these elements is unstated. The necessary types of understanding and learned practices to make instructional decisions that influence the balanced integration of language and content during instruction are the practical knowledge that teachers seek to gain. Secondary teachers overlook that 1) as content specialists, they are appropriately positioned to support students in recognizing the specialized ways language works in their disciplines (Fang & Schleppegrell, 2008) and that 2) discipline specific conversations require precision and a shared language around indicators of effective integration of language and content; orientations towards process and product expectations for students; the specific English language development learning to be employed in teaching the content; and examining instructional modifications as opportunities to improve instruction.

UNDERSTANDING THE CHANGE PROCESS

Within the change process, I delineate the various learning, unlearning and new behaviors that are needed to enact the desired changes and the supports necessary to facilitate this process. I also explain the intervention and its theoretical underpinnings that would serve to enact the change intended by the design of this study.

Through a review of the professional literature described in the earlier section on problem diagnosis, we have discussed the following domains relevant for this study challenges of focused instructional inquiry in teacher teams, secondary content area teacher challenges in ELL instruction, and language and content integration. The desired behaviors for content area teachers include: 1) prioritize team meeting conversations around matters surrounding the instructional core using the teacher team cycle of inquiry, 2) deepen their knowledge and understanding of how to effectively integrate language and content in their own classroom practice in service of improved student outcomes, and 3) gain confidence in their ability to implement lessons that effectively integrate language and content.

CHANGE DRIVERS

In order to effect change and promote new learning, this designed intervention attempts to enact the following key change drivers: Intentional use and sequencing of existing school structures and assets; promoting a common process of prioritizing instructional conversations around students' needs during team meetings to create a sense of urgency and engender shared accountability; awareness of and addressing specific student learning gaps; and acquiring new competencies and making visible the incremental progress toward developing a shared understanding of instructional practices that integrates both content and language.

Diagram 2.2: Change Drivers Diagram

Change Drivers

Goals

Understanding the Problem

Problem of Practice

The absence of systematic learning that utilizes pre-existing school structures and assets for instructional improvement.

The lack of focus surrounding matters of instruction.

Little awareness and practice around content and language integration.

The problematic behaviors are:
*Teacher teams tend to circumvent instructional matters, and when they do enact the enabling structures for discussing instruction, the conversations are non-substantive and disconnected.

*For the majority of teachers, the mere inclusion and enactment of ELD strategies in subject matter content instruction would suffice.

intentional use and sequencing of existing school structures and assets

Promoting a common process of prioritizing instructional conversations around students needs during team meetings creates a sense of urgency and engenders shared accountability

Awareness of student needs and recognizing one's role in addressing specific student learning gaps

Acquiring new competencies and enabling incremental progress to be visible develops a shared understanding of instructional practice

Proximal Outcomes:
Teachers will:
*prioritize team meeting conversations around matters surrounding the instructional core using the teacher team cycle of inquiry,

*deepen their knowledge and understanding of how to effectively integrate language and content in their own classroom practice in service of improved student outcomes

*gain confidence in their ability to implement lessons that are truly integrate language and content.

Distal Outcomes:
*Improved gains in students English language development

*Increased teacher performance in enacting effective ELD strategies in content area instruction

CHANGE DRIVER 1: INTENTIONAL USE AND SEQUENCING OF EXISTING SCHOOL STRUCTURES AND ASSETS

I mitigate against the absence of systematic learning and potential reluctance to get involved in deeper team learning with the intentional use and sequencing of existing structures. In doing so, an asset-based approach to learning is enacted. Since no common framework for teaching and learning currently grounds the instructional work of this school context, I consult the literature on school improvement and the cycle of inquiry to examine possible constructs.

Instructional Core

Literature on school improvement argues that the work of schools is to improve the curriculum and instruction in service of increased student achievement (Bryk et al., 2010; City et al., 2009; Troen & Boles, 2012). Elmore's (2008) work on the "instructional core" (see Diagram 2.2) highlights the dynamics of the relationship between the teacher and student in the presence of content. The ways in which these relationships transpire in practice are often through unit and lesson planning, designing rich cognitively demanding tasks, the use of grade level texts, and lesson enactment through instructional strategies, to name a few. For a single teacher who teaches a student within a specific subject area content, the instructional core can be viewed as the relationship and dynamics between these three elements as seen in the diagram below.

Diagram 2.3: Elmore's Instructional Core
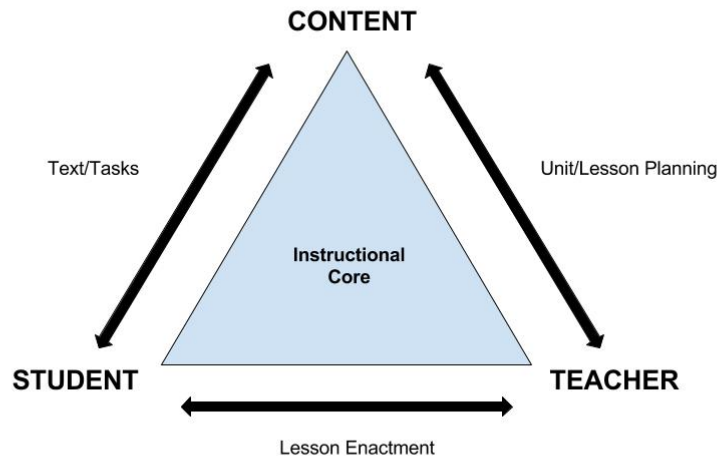
An adaptation of Elmore's Instructional Core model can be translated for the context of this study: Effective teaming initiatives and activities that center around improvements in common teaching practices, the shared content given to their cohort of students, and the role that a cohort of students play in their own learning (Troen & Boles, 2012). The adapted Instructional Core model for teacher teams (see Diagram 2.3)—Teacher Team Instructional Core—visualizes the interaction of the teacher team and the cohort of students they teach, through the shared content of English language development. These interactions often materialize through curriculum shares, using tuning protocols, rubrics, and peer classroom observations (learning walk/inter-visitations) and looking at student work activities. For a teacher team whose common goal is to teach English language development through their respective content area expertise to the same group of students, the teacher team instructional core can be viewed as the relationship and dynamics between these elements as seen in Figure 2.3.

Diagram 2.4: Adapted Instructional Core Model for Teacher Teams
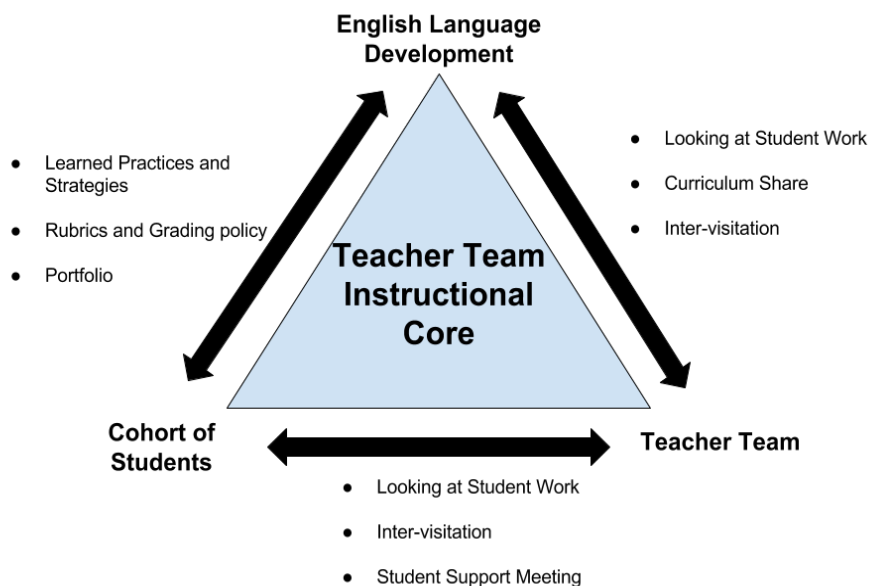
By utilizing pre-existing structures to facilitate the interaction between the key elements of the Teacher Team Instructional Core model (see Figure 2.3), there is an increased traction to enact the change process. Such structures are familiar for participants and they come from an "appreciative inquiry" (Coughlan and Brannick, 2014) stance that focuses on "what already works in a system instead of its deficiencies." Two of the current structures that will be applied to the intervention design are "looking at student work" and "learning walks," commonly known as peer observations. Though superficially structured and haphazardly implemented, both are current structures that exist in the context of this study, bridging the relationship between the shared content of English Language development and teacher teams as well as the inter-relationship between the teacher team and its cohort of students. Since certain structures that are already part of their daily work in grade level team meetings are utilized, teachers appreciate and find comfort in the lowered cognitive burden of learning and engaging in a new process., Teachers perceive this approach as optimizing current processes and structures to address the need for deepening meeting conversations around instruction. Teachers value the use of familiar processes because they see it as part of the work that they already do and not as an additional thing to do. Such familiar processes reduce the learning anxiety that is critical to the change process. Familiar routines increase the psychological safety among participants that allows for new learning to occur (Schein, 2010).

Next, I address the lack of alignment and coordination of curricular resources and strategies among teachers by consulting the knowledge base on the ways in which teachers engage in systematic learning. I turn to literature on the cycle of inquiry to explore possible mechanisms for systems and structures.

Cycle of Inquiry

When there is varied expertise among staff members in a grade level team, novice teachers are eager to learn from experienced teachers (Gersten, 1999). In this study, teachers' value when they learn and gain insight from each other's practices and receives feedback on their own practice. The cycle of inquiry is a mechanism to organize this type of group learning.

Copland (2003) defines the cycle of inquiry (see Figure 3) as an effort to embed structures and processes at the school level that promote the sustained pursuit of improved student learning. By engaging teacher teams to pose, investigate and respond to questions about student learning, the cycle of inquiry helps promote cultural change, develop consensus, clarify problems in practice, and build teachers' instructional expertise. It is a strategy that aims to inform school actors about the degree to which they are realistically achieving what they think they should be accomplishing regarding teaching and learning for students. Though neither simple to provide nor readily supported, engaging in a cycle of inquiry could serve to provide "the time, guidance, and intellectual capacity for teachers to engage in authentic inquiry that can lead to individual and collective changes in instructional beliefs and practice" (Nelson & Slavit, p. 114). The cycle undergoes the following steps: *Selecting and narrowing a question for investigation, identifying measurable goals with specific outcomes as measures of success, creation and implementation of an action plan, and the collection and analysis of data generated from the implemented plan.*

Diagram 2.5: Nelson & Slavit's (2008) Cycle of Inquiry

Develop a common vision for teaching and learning

Desseminate findings

Compare current practice to vision

FOCUS

Derive implications for changing practice

Formulate inquiry question

Implementation

Analyze data

Study inquiry strategies to adopt

Evaluation

Collect data

Develop consensus for implementation plan

Implement plan

Develop plan to monitor implementation

Often teachers rush towards a solution without a deep understanding of the students' academic gaps, reverting to common, uninformed processes of choosing instructional strategies before first defining the problem. In addition, teachers unfamiliar with inquiry work perceive it as a procedure, and simply go through the motions, resulting in a superficial level of analysis that yields extremely limited or no results. However, Little et al. (2003) assert that cycles of inquiry could be an effective strategy to try instructional strategies and change student achievement levels; this is especially helpful when newer teachers unfamiliar with specific strategies work alongside more experienced teachers to learn more about the nuances, intricacies and "mutual adaptations" (Borko, 2004; Newmann et al., 2001; Finley, 2000; Little et al., 2003) that come with implementing the strategy.

Copland (2003) explains that teachers who are engaged in high levels of inquiry cycles often selected a small, focused group of students to identify effective teaching strategies that impact student performance. By connecting classroom level cycles of inquiry to school wide instructional focus, teachers were then able to share effective practices to the greater school. Engagement in this process refined school wide structures to better support the teacher classroom practices that lead to improved instructional coherence.

Through the intentional use and sequencing of existing school structures and assets that teachers already value in their work, high leverage practices and fellow teacher expertise are socialized to newer teachers in a systemized way to enable deeper conversations around instruction. Effective professional learning must integrate various initiatives to promote coherence within the way schools are organized; coherence that translates to collective, discernible changes in teacher classroom practice (Guskey, 1994; Little, 1993). To organize these school level assets, I propose a teacher team inquiry cycle framework that merges the Instructional Core Model for Teacher Teams centered within adapted elements from the Cycle of Inquiry (see Figure 2.5 below).

Diagram 2.6: Teacher Team Inquiry Cycle
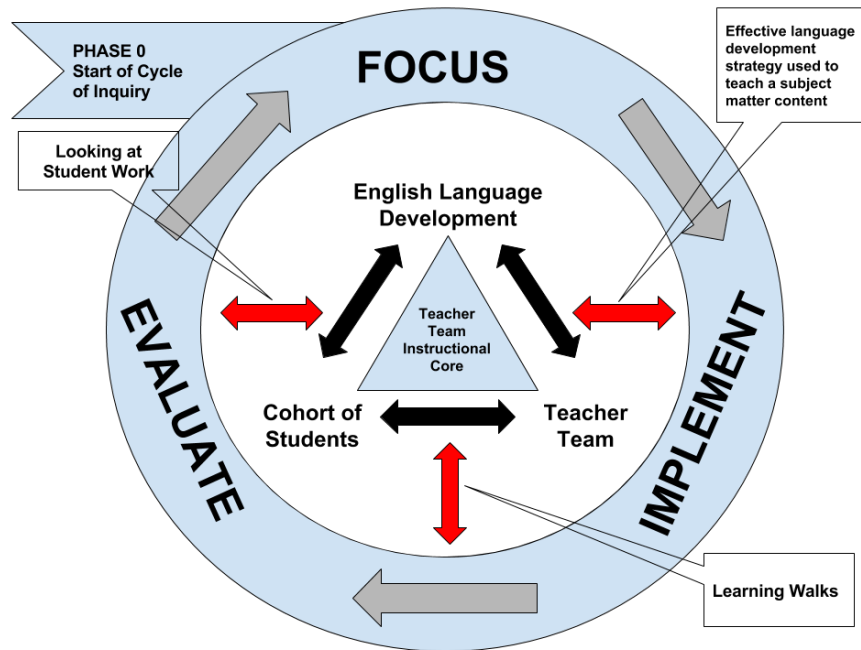
CHANGE DRIVER 2: PROMOTING A COMMON PROCESS OF PRIORITIZING INSTRUCTIONAL CONVERSATIONS AROUND STUDENT NEEDS DURING TEAM MEETINGS CREATES A SENSE OF URGENCY AND ENGENDERS SHARED ACCOUNTABILITY.

In this study, Hamilton High School staff is preparing for its Western Association of Schools and Colleges (WASC) accreditation visit. The WASC visit is a six-year ongoing cycle of quality whereby the school exhibits the commitment, competence, and capacity to support high-quality student learning towards school improvement. Throughout the cycle, a school is expected to address the school-wide action plan and priorities, and to demonstrate evidence of acceptable student achievement and school improvement (WASC Accreditation Process Overview). One of the priorities from the last WASC visit is for the school staff to "increase academic rigor and consistency throughout the curricular areas along with creating a sense of urgency *to improve student achievement"* (WASC Report, 2014). This connects to the school's district-wide instructional rounds inquiry question that asks, *"To what extent are students working collaboratively on rigorous tasks?"* (District Instructional Rounds, 2016). Meanwhile, one of Hamilton HS's instructional foci is language and content integration. The school's strategic plan to "increase academic rigor and consistency" is defined by how "students are working collaboratively" through "rigorous tasks" that "integrates language and content" instruction. Takeaways from the instructional rounds held in October and formal and informal walkthroughs throughout the year indicate that the presence of "student-to-student interaction" varied across classrooms. This interaction would be a focal practice to shift, especially if the school's instructional rounds inquiry question assumes that "students are working collaboratively." Such school-wide focus would drive teachers to work towards prioritizing classroom instruction that promotes student collaborative activities, since one way of supporting

language learning in content instruction is to provide opportunities for students to interact with one another to discuss the lesson's information, concepts and vocabulary (Echevarria et al., 2011).

As a vehicle to move towards this school-wide focus, the teacher team has agreed to engage in instructional inquiry. However, two of the factors that contribute to the challenge of focused instructional inquiry in teacher teams are 1) the unsustainability of engaging and committing to a reflective process given the constraints of time and 2) how accountability among teacher team members is often unclear or void of guidance. Since meeting time is already limited in teachers' schedules, it is critical that conversations around instruction are prioritized. In Little et al.'s (2003) study on teacher teams, conversations during meetings reflected the strong urge to shift conversations to broad issues around teaching practice rather than focused discussion around a central issue, given that teachers were often uncertain as to how to make their conversation as a productive enterprise.

To address these two barriers, I intend to develop a teacher team's orientation towards a collective and shared responsibility for a focal group of students which I believe engenders shared responsibility that is in line with meeting the schools' goals as evaluated through the WASC accreditation visit. In doing so, establishing a shared responsibility reduces the professional isolation of teachers when thinking about how to best support particular students in their classes. Engaging in a systematized process that prioritizes instructional discussions during meetings connects teachers to other colleagues who can provide insights about the same students of interest by sharing useful information about students and effective classroom practices (Gleason & Gerzon, 2013). For the context of this study, teacher teams serve as a professional learning community. A professional learning community is a forum for promising practices that can be motivating for both teachers and students when combined with other effective strategies. Multiple studies show the positive effects of professional learning communities to student achievement and teacher efficacy (Bryk et al, 2010; Rosenholtz, 1991). As a professional learning community, the collective wisdom gained through reflective conversations among teachers helps to better understand students' learning challenges in context and to generate new knowledge to address them. Educators engaged in reflective dialogue promote collective knowledge creation, learning, urgency, and control that focus on student learning and results (Kruse et al, 1993; Stoll et al, 2006; Blankstein, 2004; Eaker et al., 2002). In addition, such collective action often surfaces conflict that can be capitalized as a learning opportunity and a catalyst for cultural change (Achinstein, 2002).

Also, effective facilitation is tantamount. An effective facilitator builds a group and helps deepen a conversation that requires a balance between comfort and challenge. Thus, effective facilitation is the product of strategic and skilled leadership (Little et al., 2003). Additionally, if a teacher team is to be intellectually vigorous, members need solid foundational knowledge, skills and expertise. Therefore, professionalization of teachers' work is also about enhancing teachers' capacity and increasing teachers' expertise (Stoll et al., 2006). Teacher teams organized as professional learning communities serve as critical mechanisms for promoting self-efficacy among its participants. The concept of individual and group learning enhances participants' effectiveness and improvement in their practice (Achinstein, 2002; Stoll et al, 2006), especially when discussing shared students' experiences. Teacher teams are not only expected to develop a learning stance but also possess the willingness to self-improve, to increase their capacity, and to be proactive about engaging (Blankstein, 2004; Kruse et al, 1993) in conversations on how to best support their students of interest. The sense of productiveness

and work value increases as members of a teacher team engage in meaningful conversations that encourage both agreement and dissent—an impetus for improving the quality of teacher artifacts and seeing incremental improvements in students' academic performance. Therefore, teacher teams could serve to balance the intrinsic motivation for individual learning and the extrinsic motivation to act in service of students.

CHANGE DRIVER 3: AWARENESS OF STUDENT NEEDS AND RECOGNITION OF ONE'S ROLE IN ADDRESSING SPECIFIC STUDENT LEARNING GAPS

Another factor that contributes to the challenge of focused instructional inquiry could be attributed to teachers' orientation toward accountability practices, such as adherence to agendas and protocols, that lead to superficial conversations lacking in "critical dimension" (Troen & Boles, 2012). Such critical dimension includes the examination of curriculum and engagement of teachers in observation, critique and discussion around each other's work based on evidence of student learning. By specifying what students need to learn or how instruction in a precise skill advances learning, teachers can pinpoint where the learning breaks down for students and gain a deeper understanding of their instruction (Panero & Talbert, 2013). By becoming aware of students' needs and recognizing their role in addressing these needs, teachers are not only compelled to act upon improving their practice, but it also to reduce the distance between themselves and their students by creating an appreciation for students' individual differences and a desire to get to know them as individuals (Gersten, 1999). The awareness of gaps in students' understanding during observed lessons, as well as the increased competence of teachers to implement lessons and recognize that learning is indeed occurring for students, motivates teachers to continually engage in focused instructional inquiry since such outcomes justifies the effort (Grabe & Stoller, 1997).

Suggestions for teacher effectiveness in addressing students' specific learning gaps in both language and content include: to consider and be aware of the linguistic demands of the content area; to understand the language functions that a subject matter content require, including the determination of the language forms; and to determine the varied ways to engage and practice language skills with familiar content prior to introducing new content in order for students to have the necessary tools to engage in the lesson (Dutro & Moran, 2003). In order to respond effectively to student learning gaps in both language and content, teacher team inquiry must first focus on a small subgroup of students. Starting with a focal group of students is not an end in itself, but a strategy for diagnosing patterns in the larger cohort of students so that it can be improved (Panero & Talbert, 2013). This study then capitalizes on the organization's existing use of "looking at student work" and "learning walks" as the vehicle for this change driver.

Looking at Student Work

For my study's context, I use Little et al.'s (2003) definition of "Looking at Student Work" as the use of student work samples (student created artifacts) for their utility to inform teaching practice and implications for instructional decisions. Little et al.'s (2003) study on teacher collaboration found that an important contributor to what a teacher team is able to accomplish through Looking at Student Work is by explicitly attending to the subject content of any given piece of student work and to related questions of student learning and teaching practice. Student work can be used as disconfirming evidence (Schein, 2010) that orients

teacher teams to ground the conversations around instruction based on what students are learning and their utility for instructional implications (Little et al., 2003). Conversations around evidence of student learning through their work help detach conversations from a personal to a more objective lens. The most generative conversations around looking at student work normally occur when teachers' assumptions are challenged, and disagreement on matters involving practice (Little et al., 2003) come to the surface. Sustained and lively conversations about student work occur when teacher teams take a more flexible and creative approach to the tools and craft them purposefully for their own context and needs (Little et al., 2003). In this context, such conversations are often facilitated through the use of a Looking at Student Work protocol to organize discussions and structure participation. Additionally, examining how teachers implement particular practices in their classrooms through learning walk protocols and socializing that learning in meetings could help develop a shared learning of how to best incorporate integrated language and content in classroom instruction.

Peer Observations

To bolster "instructional talk" (Troen & Boles, 2012), the use of peer observations—also known as learning walks—and video observations that currently exists in this school context, are employed. A carefully conceived, systematic process of engaging in peer observations can lead to reflective changes in teaching practices (Millis, 1992). When well executed, and observers know what to look for, peer observations can serve as a powerful way to document teaching and improving instructional practice. There is a potential for self-reflection but also an opportunity to discuss with others. This promotes not only collegial dialogues, but also increases open communication, satisfaction, motivation and renewed interest in teaching (Menges, 1987). Evertson and Holley (1981) argue that classroom observations provide a lens to view "the climate, rapport, interaction and function of the classroom" that no other source can provide since a peer observer can serve to openly take notes but remain as a detached observer and document low-inference observations. These notes and observations then become collegial conversation topics for future instructional improvement.

For an inter-disciplinary team of secondary teachers, the benefit of peer observers from outside a teacher's content discipline can provide more objectivity, where a teacher's lack of familiarity with a subject area could force other teachers to explain basic concepts and rationales in a way they otherwise would not have done, especially when some team members had relevant expertise and experience in that subject area (Little et al., 2003). Peer observers also bring less pre-conceptions regarding content specific topics, embody a more student perspective orientation, and focus on pedagogical practices and activities that unfolds in the actual lesson (Millis, 1992). As a result, the process of peer observation facilitates a learning not only for the observed teacher, but also contributes to the observer's own professional growth. Findings from a study conducted with several junior high school teachers of English, social studies and math in the San Francisco Bay Area (Sparks, 1986) reveal that, since secondary school teachers rarely see other teachers in their teaching mode, watching their colleague teach may have been in and of itself a powerful learning experience, where some teachers in the study cite that they picked up new ideas from their colleagues. Another finding from the study (Sparks, 1986) is that since peer observers become involved in the analysis of the teacher and student behavior they observed, such engagement may have helped them accurately analyze their own behavior that enables them to directly apply changes to their own teaching practices. As one of the learning outcomes for this design study, teachers would learn how to identify effective instructional

English language development strategies through student cues and build their capacity to articulate the ways that subject matter content is taught using that strategy through teacher moves.

CHANGE DRIVER 4: ACQUIRING NEW COMPETENCIES AND ENABLING INCREMENTAL PROGRESS TO BE VISIBLE DEVELOPS A SHARED UNDERSTANDING OF INSTRUCTIONAL PRACTICES

Secondary content area teachers' challenges in ELL instruction are rooted in the absence of a shared language among members of a teacher team; an inconsistency in effective teaching practices that addresses the language demands of specific subject matter content; assumptions around how academic language is acquired; and insufficient knowledge, skills and preparation in educating English learners. To improve the quality of instruction for newcomer students, teachers must want to change their practice. In order to promote observable impact via change in teacher practice however, enabling teachers to see small increments of progress facilitates the change; individual teachers must consider change as a developmental process (Desimone et al., 2002; Guskey, 1994). This change includes developing a shared understanding of specific teaching practices connecting both language and content through clear, common definitions of terms and goals. In order to do so, active learning and collective participation of teachers to develop new competencies in enacting ELD strategies that promote student-to-student interaction to effectively address both the language and content needs of students through their instruction are high leverage elements of impactful professional learning (Desimone et al., 2002; Echevarria et al., 2011). If such communal discourse and competencies in instruction are promoted and fostered among teachers with a sense of improvement in both their practice and students' performance, then change in teacher practice comes to fruition that serves as the collective goal (Avalos, 20011; Borko, 2004; Desimone et al, 2002).

Levels of Language Development and Subject Matter Content

Typically, students are classified in the categories of low, medium, and high depending upon their classroom academic performance, behavior and ability. In this study, the inter-disciplinary teacher team directs their inquiry on a focal student as their unit of inquiry focused on the level of language and subject matter content knowledge. This focal student serves as a representative case for a respective subgroup within the larger student cohort as a means to better understand common language needs in teaching subject matter content. An understanding of the focal student's English language development level would help acknowledge the language and literacy needs of similar subgroups of students, particularly in core content classes. Core content area classes, where English language development instruction often varies, require careful attention for a subset of English learner students who are:

1) Incipient bilinguals—students who have arrived very recently in the US, many of whom speak and understand little or no English;

2) Ascendant bilinguals—students who have more experience with English and have developed enough oral proficiency and literacy in the language to engage in some kinds of academic and social tasks, but have difficulty with others;

3) Fully functional bilinguals—students who appear to be quite fluent in English but have oral or written English that is marked by "second language" features, along with underdeveloped academic literacy skills (Bunch et al., 2013).

Additionally, since this research seeks to facilitate effective integration of English language development in subject matter content, English learners' subject matter knowledge will also be considered using Alexander, Kulikowich & Shulze's (1994) three stage model of learning. In this three-stage model, subject-matter knowledge is classified in two forms: topic knowledge and domain knowledge. Topic knowledge is defined as "knowledge related to a specific body of discourse" whereas domain knowledge is described as "knowledge broadly related to a particular field of study." This three-stage model classifies a student's subject matter knowledge in the following categories:

Period of Acclimation
- *Limited subject-matter knowledge*
- *Knowledge about the domain is fragmented, consisting primarily of bits and declarative knowledge*
- *Simple procedures are inconsistently exercised*
- *Possess some topic knowledge, however such knowledge doesn't necessarily belong within any well-defined domain-knowledge structure*
- *More likely intrigued or aroused by more transient, more concrete, and more enticing aspects of the situation, such as seductive details or the personal meaning or connection of the content*
- *Information acquired and are likely to recall is more apt to be of less importance and verbatim by nature*
- *Learners tend to be un-invested in any long-term manner or depth.*

Stage of Competency
- *Knowledge structure as more coherent, with an increased breadth and depth of domain knowledge.*
- *Declarative knowledge increases and domain procedures become more complex and more routinely executed*
- *Learner's topic knowledge becomes more extensive and more closely tied to a relevant domain.*
- *Learner may be drawn to a tantalizing information, but the learner can still recognize this as less central or not as important or connected to the domain*
- *Exhibits more recall on more important information and learner's individual interest in the domain is promoted through greater effort and involvement in the domain learning*
- *Learners' ability to visualize or contemplate on concepts that are often more difficult or less appealing*
- *Preponderance of outer-space over inner-space knowledge was also a qualitative characteristic of this group; Outer space concepts are more apt to be encountered in out-of-school contexts, such as television, magazines and movies.*

Proficiency or Expert Stage
- *Possess highly structured, coherent bodies of domain knowledge.*
- *Acquire topic knowledge that can be characterized as rich and intricately aligned to the domain.*
- *Focused over content that is centrally important to the domain.*

- *Less important and verbatim information to them is of no difficulty, and recall of important, more demanding and salient information is equally strong.*
- *Tends to distinguish text that is interesting from that which is important more fluently.*

Shared Learning

Literature on effective teacher development (Borko, 2004) emphasizes how context—the relationship between the teacher professional learning and the teacher as a learner—is at the core to which change in teacher practice occurs. Context is a critical element that considers each teacher as a learner within their situated social systems which eventually becomes a fundamental component of what teachers learn; In order to improve their practice, teachers must also engage in new learning and develop new competencies in matters surrounding instruction (Borko, 2004). Since the context of this study revolves around an inter-disciplinary team of secondary teachers with varied experience and expertise in integrating language and subject matter content in their practice, effecting change in teacher practice can be difficult. Often, effectiveness of teacher practice is measured subjectively and what is lacking is measuring the visible, actual changes in teacher practice. Change could eventually occur if the gap between shared beliefs and suggested practices in teachers' professional learning is recognized (Desimone et al, 2002) and when the professional learning allows for creating and sustaining dissonance through self-reflection, dialogue and on-going analysis (Avalos, 2001; Wilson & Berne, 1999). Schein (2010) argues that this crux for change is situated at the tension between performance and learning anxiety; this tension requires the use of disconfirming evidence and engaging in the process of "unlearning" that could be achieved through careful examinations of both a teacher's practice and student produced artifacts as well as engaging in collective learning that looks at new teaching practices to contrast with current practices. Thus, I aim at an integrated, collaborative professional learning design that takes into account the relationships of individual teachers, a shared common language to discuss their work, collective learning around new skills and competencies in effective instruction, and the participants' situatedness in their social context.

For this study, the task of integration of content and language in practice is often a difficult charge for teachers. Since issues of capacity and skill (Fillmore & Snow, 2000) are often cited as the barrier for teachers' inability to effectively integrate language and content in practice, addressing this issue is a learning outcome within this design. As needs assessments showed, the expertise in integrating language development into content area knowledge varies among teachers in this team. One way to reduce this variation is for participants to discuss and articulate: 1) their understanding of the content they are to teach students, 2) their presentation of concepts to students in a fashion that makes sense to students, 3) their decisions during the actual lesson implementation on how to integrate language development through their content instruction using an ELD strategy that promotes student-to-student interaction, and 4) their examination and analysis of student artifacts in order to gain a sense of improved student outcomes, benefits all participants.

INTERVENTION DESIGN

A series of learning opportunities that consists of 9 sessions for 23 hours of activities is designed to provide secondary content area teachers the appropriate skills, knowledge and structure to foster a shared understanding around meaningful subject matter content and English language development integration to support newcomer students. The goal of this design is to

promote and deepen productive conversations for an interdisciplinary team of secondary teachers around English language and subject matter content integration. By engaging through specific activities within this intervention design, teachers develop a shared vision of practice that aims to promote change in individual practices or individual beliefs (Hargreaves & Fullan, 2000).

For this study, participants will engage in the following series of activities in order to enact the following key change drivers: *Intentional use and sequencing of existing school structures and assets; reducing professional isolation by engendering shared accountability through a common process of prioritizing instructional conversation with other teachers; awareness of and addressing specific student learning gaps; and acquiring new competencies and enabling incremental progress to be visible develops a shared understanding of instructional practices that integrates both content and language.*

Diagram 2.7: Intervention design and associated activities
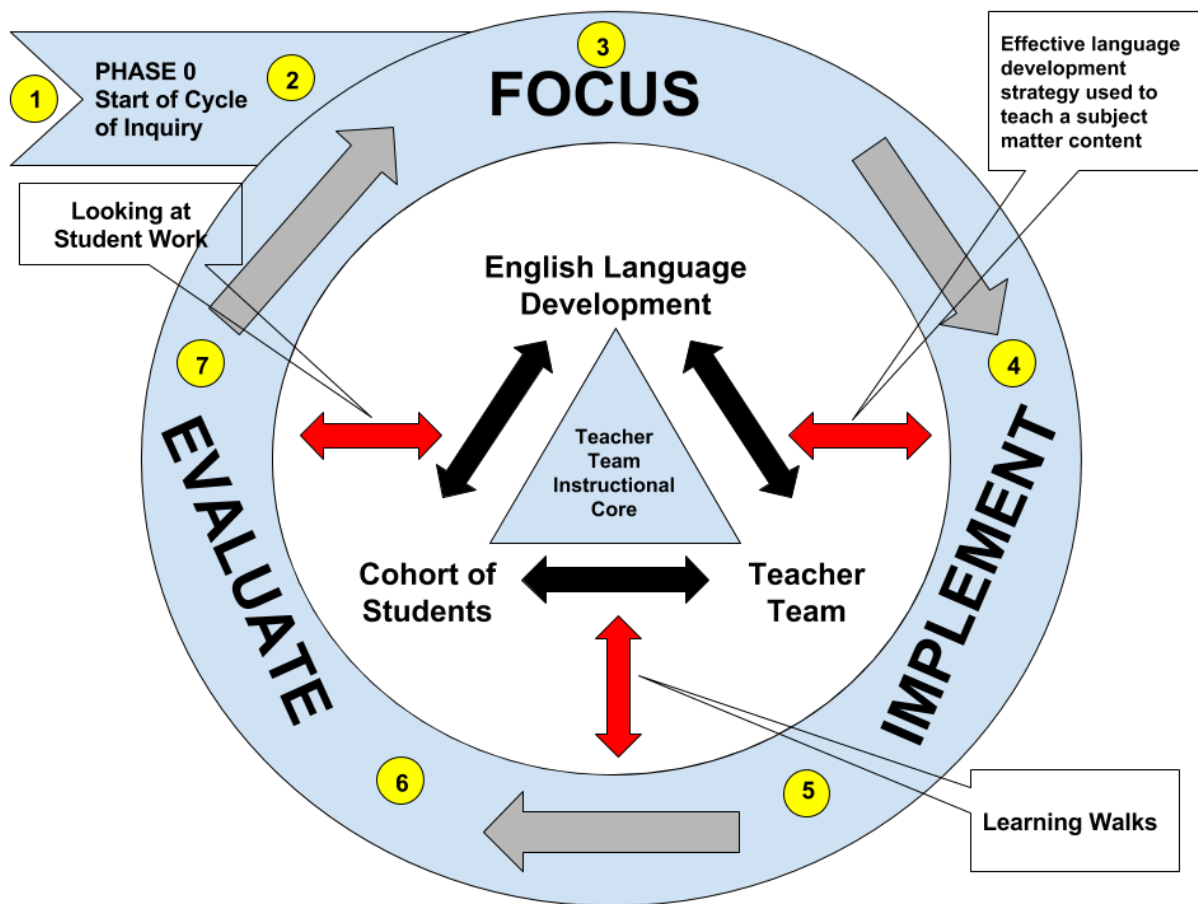
Table 2.1: Intervention Activities and Learning Outcomes

INITIAL EVALUATION PHASE (PHASE 0)	
TOOL	**ACTIVITIES**
Framing Document with Cycle Introduction and Norms List of Common Students by teacher team that includes individual student CELDT data, Reading Level scores on Reading Inventory assessment and attendance rate. Student Selection Matrix (see Appendix C) Observation Guide Activity #1 Observation Guide Activity #2 (see Appendix C)	**ACTIVITY #1:** Group Norming Introductory Activity: Introduce the teachers to the Teacher Team Cycle of Inquiry. Frame the goals and rationale of the intervention design to organize the inter-disciplinary team of teachers around the mechanics and structure of the Teacher Team Cycle of Inquiry (TTCOI) and how it connects with the school's instructional focus, WASC goals, upcoming WASC evaluation visit and district instructional rounds inquiry question. **ACTIVITY #2:** Student Subgroup Selection Teachers will be organized in small teams of three or four teachers, depending on their shared students. Grade level team of teachers then selects three students from their list of common students, as a representative sample of the variety of students in the grade level. Using the student selection matrix tool, the teacher team diagnoses the student subgroup by assessment of the students' levels of competency that classifies their bilingualism—*incipient, ascendant and fully functional bilinguals* (Bunch et al., 2013)—and their level of subject matter knowledge (Alexander et al., 1994). These levels are indicated as low, mid, high on the graphic organizers. Teachers explain why they placed a student in that particular part of the matrix to surface their conceptions of subject matter knowledge and language development indicators. As a group, they then compare it to research and establish a shared set of indicators for both language development and subject matter content. This becomes the anchor document to refer to when thinking about the integration of language and content throughout each presenting teacher's cycle of inquiry. Teachers then select one student as their focal student for their small teacher team inquiry.

Learning Outcomes:
In these activities, participants are to:
- Orient themselves to the cycle of inquiry.
- Become familiar with the rationale of this intervention design including an understanding of CELDT data and reading levels as a way to make informed decisions.
- Understand how team dynamics and collaboration can be a powerful learning for team members.
- Identify a subgroup of students based on two categories: bilingualism and subject matter content level.
- Articulate and apply the criteria for student bilingualism and subject matter knowledge levels based on two frameworks of classification.
- Deepen their ability to recognize the complexities of integrating subject matter content and language by acknowledging the current depth of language and subject matter content needs of their selected students.
- Develop a shared criterion for language development and content indicators.

FOCUS PHASE (PHASE I)	
TOOL	**ACTIVITIES**

Classroom video of an effective language content integration in practice. Classroom Observation Guide (see Appendix C) Observation Guide Activity #3 (see Appendix C)	**ACTIVITY #3:** Instructional Video Analysis By focusing on a subgroup of students, we can identify salient findings from what students know and have learned, their challenges, and what these imply about classroom instruction. This leads to ongoing conversation around language development and academic content knowledge. To help support this ongoing conversation, a videotape of an effective classroom instruction would be analyzed using an observation instrument. Providing this video for analysis helps create a tension between what teachers see as integrated language and subject matter content instruction to their own classroom instruction, with the focal student in mind. First, teachers would examine the lesson plan and discuss the teacher's intention for the lesson. Then, teachers would watch and discuss patterns they saw in the video around student-to-student interactions and connect this to their own practice and the challenges they face. The team of teachers grapples with the question: *How do we currently teach?* In other words, *how do we integrate academic content with English language development in our everyday teaching practices that promotes student interactions?*

Learning Outcome:
In these activities, participants are to:
- Recognize teacher expectations with actual student performance level.
- Analyze classroom instruction that promotes effective language and content integration.
- Learn how to use a classroom observation guide.
- Identify effective instructional strategies that leverage English language development through student-to-student interactions.
- Articulate ways that subject matter knowledge is taught through the instructional strategy of promoting student-to-student interactions.
- Build their capacity to articulate ("look-fors") the ways in which subject matter knowledge can be integrated within ELD strategy that promotes student-to-student interactions.

IMPLEMENTATION PHASE (PHASE II)

TOOL	ACTIVITIES
Tuning-Bridging Protocol that includes: - Task Introduction - Adapted Tuning/Bridging Questions - Developing an artifact for evidence of strategy implementation. - Providing actionable next steps for implementation and monitoring implementation (see Appendix C) Collaborative Conversations – ELD strategies Inventory - Strategically embedding team-wide strategies to adopt within the presented task. Utilize strategies that promote student-to-student interaction. (see Appendix C)	**ACTIVITY 4A:** **ELD STRATEGY DISCUSSION** With the focal student in mind, teachers select an ELD strategy from an inventory of collaborative conversation strategies that teachers in the school have found effective in developing student-to-student interactions that they have used to teach their content. As a group, the teacher team selects one strategy that they can all implement in their own classrooms to teach their respective content. This allows teachers to examine the ELD strategy and how it is used in various content instructions to promote language development. Teachers could surface "mutual adaptations" (Little et al., 2003; Borko, 2004; Newmann et al., 2001; Finley, 2000) that may surface from each teacher's use of the ELD strategy to teach their respective content. **ACTIVITY 4B:** **PRESENTING TEACHER AND THEIR LESSON** In presenting their lesson using the adapted tuning-bridging

	protocol, the presenting teacher articulates the main ideas and objectives of their upcoming lesson. The presenter anticipates how the focal student might articulate their understanding of the concepts. The presenting teacher explains how they plan to address the integration of language and content in their instruction using the selected ELD strategy promoting collaborative conversations.
	After engaging with the adapted tuning-bridging protocol, the presenting teacher comes away with suggestions and next steps for their lesson implementation from fellow team members.
	The presenting teacher schedules to film their lesson implementation that they plan to show to the rest of the teacher team for the next team meeting.

Learning Outcomes:
In these activities, participants are to:
- Select an appropriate ELD strategy on promoting student-to-student interaction that would support the focal student to develop language and subject matter content knowledge.
- Refer to an inventory of resources for ELD strategies that has been utilized by teachers in the school in promoting collaborative conversations.
- Consult with other teachers on student-to-student interactive ELD strategies and how they have effectively implemented them in their own instruction to teach their content.
- Consider how to best integrate the selected ELD strategy promoting student-to-student interaction in their upcoming lesson to teach a particular content.
- Develop a supportive culture of analyzing teacher work.
- Connect their teaching objectives to student friendly language through the lens of the focal student selected.
- Build their capacity to translate subject matter knowledge to student level learning objectives.
- Consider feedback from colleagues on how to best integrate ELD strategy on student-to-student interaction to teach subject matter content for the focal student.
- Be able to anticipate student thinking about the content and plan thoughtful ways to integrate ELD strategy of student-to-student interaction to increase the potential for student learning and language development.

Classroom Observation Guide (see Appendix C)	**ACTIVITY 5: CLASSROOM OBSERVATION** Teachers watch the video of the presenting teacher's implemented lesson and use the observation guide to take notes and answer provided focus questions.

Learning Outcomes:
In these activities, participants are to:
- Engage with the Observation Guide
- Apply their understanding of how subject matter knowledge can be integrated with a selected ELD strategy to promote student-to-student interaction for a focal student.
- Use low inference observations of how the teacher uses the ELD strategy to promote student-to-student interaction to teach subject matter content.
- Use low inference observation of how the focal student uses the ELD strategy to understand the content.

EVALUATION (PHASE III)	
TOOL	**ACTIVITIES**
Inter-visitation Debrief Protocol (see Appendix	**ACTIVITY 6: LESSON DEBRIEF**

TOOL	ACTIVITIES
C) Observation Guide Activity #6 Looking at Student Work Activity Guide (see Appendix C)	Presenting teacher provides a sample student work of the focal student from the observed lesson on video. The team identifies salient findings from what the student understands, have learned, their challenges, and implications to language and content instruction. Teachers would share their observations from the video observation of the presenting teacher. Presenting teacher reflects on the observations and implications to their practice. This conversation aims to surface modifications or adjustments to the implemented lesson, as it connects to the student work in order to better address integrated language and content through instruction.

Learning Outcomes:
In these activities, participants are to:
- Familiarize themselves with protocols to guide conversations around classroom observations and student work.
- Analyze the focal student's work to surface gaps and areas of improvement as it relates to how the student acquired the content through the ELD strategy around collaborative conversations.
- Analyze teacher moves as it relates to how teacher enacts the lesson using the ELD strategy of promoting student-to-student interactions to teach the content.
- Develop their capacity to look for evidence in student work of students' content understanding and language development.
- Learn from the presenting colleague on how she thinks through and reflects on her lesson enactment in integrating selected student-student interactive strategy to teach the content for the focal student.

Inquiry Cycle Debrief Protocol (see Appendix C) Observation Guide Activity #7 (see Appendix C) Post-Intervention Teacher Interview Protocol (see Appendix D)	**ACTIVITY 7: PROCESS DEBRIEF** Engage in a Debrief conversation on the Cycle of Inquiry process and accompanying protocols to discuss teacher learning and how it connects to the team's shared understanding on language and content integration, selected ELD strategy, and student outcomes. Select the next presenter for the cycle of inquiry.

Learning Outcomes:
In these activities, participants are to:
- Articulate challenges and successes of the TTCOI process to improve upon.
- Increase their confidence in trying to implement selected interactive ELD strategy to teach their subject matter content.
- Connect the process of intentional teacher integration of ELD strategy of promoting student-to-student interactions with subject matter knowledge to student outcomes.

Repeat Activities 4, 5, 6, 7 for the next presenting teacher.

INITIAL EVALUATION PHASE (PHASE 0)

TOOL	ACTIVITIES

Framing Document with Cycle Introduction and Norms List of Common Students by teacher team that includes individual student CELDT data, Reading Level scores on Reading Inventory assessment and attendance rate. Student Selection Matrix (see Appendix C) Observation Guide Activity #1 Observation Guide Activity #2 (see Appendix C)	**ACTIVITY #1:** Group Norming Introductory Activity: Introduce the teachers to the Teacher Team Cycle of Inquiry. Frame the goals and rationale of the intervention design to organize the inter-disciplinary team of teachers around the mechanics and structure of the Teacher Team Cycle of Inquiry (TTCOI) and how it connects with the school's instructional focus, WASC goals, upcoming WASC evaluation visit and district instructional rounds inquiry question. **ACTIVITY #2:** Student Subgroup Selection Teachers will be organized in small teams of three or four teachers, depending on their shared students. Grade level team of teachers then selects three students from their list of common students, as a representative sample of the variety of students in the grade level. Using the student selection matrix tool, the teacher team diagnose the student subgroup by assessment of the students' levels of competency that classifies their bilingualism—*incipient, ascendant and fully functional bilinguals* (Bunch et al., 2013)—and their level of subject matter knowledge (Alexander et al., 1994). These levels are indicated as low, mid, high on the graphic organizers. Teachers explain why they placed a student in that particular part of the matrix to surface their conceptions of subject matter knowledge and language development indicators. As a group, they then compare it to research and establish a shared set of indicators for both language development and subject matter content. This becomes the anchor document to refer to when thinking about the integration of language and content throughout each presenting teacher's cycle of inquiry. Teachers then select one student as their focal student for their small teacher team inquiry.

Learning Outcomes:
In these activities, participants are to:
- Orient themselves to the cycle of inquiry.
- Become familiar with the rationale of this intervention design including an understanding of CELDT data and reading levels as a way to make informed decisions.
- Understand how team dynamics and collaboration can be a powerful learning for team members.
- Identify a subgroup of students based on two categories: bilingualism and subject matter content level.
- Articulate and apply the criteria for student bilingualism and subject matter knowledge levels based on two frameworks of classification.
- Deepen their ability to recognize the complexities of integrating subject matter content and language by acknowledging the current depth of language and subject matter content needs of their selected students.
- Develop a shared criterion for language development and content indicators.

FOCUS PHASE (PHASE I)	
TOOL	**ACTIVITIES**
Classroom video of an effective language content integration in practice. Classroom Observation Guide (see Appendix C)	**ACTIVITY #3:** Instructional Video Analysis By focusing on a subgroup of students, we can identify salient findings from what students know and have learned, their challenges, and what these imply about classroom instruction. This leads to ongoing conversation around language development and

Observation Guide Activity #3 (see Appendix C)	academic content knowledge. To help support this ongoing conversation, a videotape of an effective classroom instruction would be analyzed using an observation instrument. Providing this video for analysis helps create a tension between what teachers see as integrated language and subject matter content instruction to their own classroom instruction, with the focal student in mind. First, teachers would examine the lesson plan and discuss the teacher's intention for the lesson. Then, teachers would watch and discuss patterns they saw in the video around student-to-student interactions and connect this to their own practice and the challenges they face. The team of teachers grapples with the question: *How do we currently teach?* In other words, *how do we integrate academic content with English language development in our everyday teaching practices that promotes student interactions?*

Learning Outcome:
In these activities, participants are to:
- Recognize teacher expectations with actual student performance level.
- Analyze classroom instruction that promotes effective language and content integration.
- Learn how to use a classroom observation guide.
- Identify effective instructional strategies that leverage English language development through student-to-student interactions.
- Articulate ways that subject matter knowledge is taught through the instructional strategy of promoting student-to-student interactions.
- Build their capacity to articulate ("look-fors") the ways in which subject matter knowledge can be integrated within ELD strategy that promotes student-to-student interactions.

IMPLEMENTATION PHASE (PHASE II)

TOOL	ACTIVITIES
Tuning-Bridging Protocol that includes: • Task Introduction • Adapted Tuning/Bridging Questions • Developing an artifact for evidence of strategy implementation. • Providing actionable next steps for implementation and monitoring implementation (see Appendix C) Collaborative Conversations – ELD strategies Inventory • Strategically embedding team-wide strategies to adopt within the presented task. Utilize strategies that promote student-to-student interaction. (see Appendix C)	**ACTIVITY 4A:** **ELD STRATEGY DISCUSSION** With the focal student in mind, teachers select an ELD strategy from an inventory of collaborative conversation strategies that teachers in the school have found effective in developing student-to-student interactions that they have used to teach their content. As a group, the teacher team selects one strategy that they can all implement in their own classrooms to teach their respective content. This allows teachers to examine the ELD strategy and how it is used in various content instructions to promote language development. Teachers could surface "mutual adaptations" (Little et al., 2003; Borko, 2004; Newmann et al., 2001; Finley, 2000) that may surface from each teacher's use of the ELD strategy to teach their respective content. **ACTIVITY 4B:** **PRESENTING TEACHER AND THEIR LESSON** In presenting their lesson using the adapted tuning-bridging protocol, the presenting teacher articulates the main ideas and objectives of their upcoming lesson. The presenter anticipates how the focal student might articulate their understanding of the concepts. The presenting teacher explains how they plan to address the integration of language and content in their

	instruction using the selected ELD strategy promoting collaborative conversations. After engaging with the adapted tuning-bridging protocol, the presenting teacher comes away with suggestions and next steps for their lesson implementation from fellow team members. The presenting teacher schedules to film their lesson implementation that they plan to show to the rest of the teacher team for the next team meeting.

Learning Outcomes:
In these activities, participants are to:
- Select an appropriate ELD strategy on promoting student-to-student interaction that would support the focal student to develop language and subject matter content knowledge.
- Refer to an inventory of resources for ELD strategies that has been utilized by teachers in the school in promoting collaborative conversations.
- Consult with other teachers on student-to-student interactive ELD strategies and how they have effectively implemented them in their own instruction to teach their content.
- Consider how to best integrate the selected ELD strategy promoting student-to-student interaction in their upcoming lesson to teach a particular content.
- Develop a supportive culture of analyzing teacher work.
- Connect their teaching objectives to student friendly language through the lens of the focal student selected.
- Build their capacity to translate subject matter knowledge to student level learning objectives.
- Consider feedback from colleagues on how to best integrate ELD strategy on student-to-student interaction to teach subject matter content for the focal student.
- Be able to anticipate student thinking about the content and plan thoughtful ways to integrate ELD strategy of student-to-student interaction to increase the potential for student learning and language development.

Classroom Observation Guide (see Appendix C)	**ACTIVITY 5: CLASSROOM OBSERVATION** Teachers watch the video of the presenting teacher's implemented lesson and use the observation guide to take notes and answer provided focus questions.

Learning Outcomes:
In these activities, participants are to:
- Engage with the Observation Guide
- Apply their understanding of how subject matter knowledge can be integrated with a selected ELD strategy to promote student-to-student interaction for a focal student.
- Use low inference observations of how the teacher uses the ELD strategy to promote student-to-student interaction to teach subject matter content.
- Use low inference observation of how the focal student uses the ELD strategy to understand the content.

EVALUATION (PHASE III)	
TOOL	**ACTIVITIES**
Inter-visitation Debrief Protocol (see Appendix C) Observation Guide Activity #6 Looking at Student Work Activity Guide (see	**ACTIVITY 6: LESSON DEBRIEF** Presenting teacher provides a sample student work of the focal student from the observed lesson on video. The team identifies salient findings from what the student understands, have learned, their challenges, and implications to language and content instruction.

Appendix C)	Teachers would share their observations from the video observation of the presenting teacher. Presenting teacher reflects on the observations and implications to their practice. This conversation aims to surface modifications or adjustments to the implemented lesson, as it connects to the student work in order to better address integrated language and content through instruction.

Learning Outcomes:
In these activities, participants are to:
- Familiarize themselves with protocols to guide conversations around classroom observations and student work.
- Analyze the focal student's work to surface gaps and areas of improvement as it relates to how the student acquired the content through the ELD strategy around collaborative conversations.
- Analyze teacher moves as it relates to how teacher enacts the lesson using the ELD strategy of promoting student-to-student interactions to teach the content.
- Develop their capacity to look for evidence in student work of students' content understanding and language development.
- Learn from the presenting colleague on how she thinks through and reflects on her lesson enactment in integrating selected student-student interactive strategy to teach the content for the focal student.

Inquiry Cycle Debrief Protocol (see Appendix C) Observation Guide Activity #7 (see Appendix C) Post-Intervention Teacher Interview Protocol (see Appendix D)	**ACTIVITY 7: PROCESS DEBRIEF** Engage in a Debrief conversation on the Cycle of Inquiry process and accompanying protocols to discuss teacher learning and how it connects to the team's shared understanding on language and content integration, selected ELD strategy, and student outcomes. Select the next presenter for the cycle of inquiry.

Learning Outcomes:
In these activities, participants are to:
- Articulate challenges and successes of the TTCOI process to improve upon.
- Increase their confidence in trying to implement selected interactive ELD strategy to teach their subject matter content.
- Connect the process of intentional teacher integration of ELD strategy of promoting student-to-student interactions with subject matter knowledge to student outcomes.

Repeat Activities 4, 5, 6, 7 for the next presenting teacher.

DESIGN FEASIBILITY

Several conditions would have to be met in order to implement this study from a structural, political, and social lens.

Structural

Students in the 9th grade and 10th grade were combined in classrooms; some students travel together sharing the same set of teachers. The combined 9th and 10th grade level teacher team was composed of twelve teachers. Within this grade level team, some of the teachers shared common students. A generated list of shared students must be created prior to selecting the smaller teacher teams within this grade level team configuration. Each of the smaller teacher

teams—Team 1, Team 2 and Team 3—will have about three to four teachers who shared a list of common students that they all taught. This study focused on one of the small teacher teams composed of three teachers. Tuesday and Thursday mornings from 8:00-8:50 am was designated for weekly grade level team meetings. School wide PD occurred on Friday mornings from 8:00 am – 9:15am. Since grade level teams met twice a week, this existing structure was used as the time to conduct this study. The grade level team meetings were utilized for matters related to teaching and learning. By focusing this specified grade level team meeting time for matters that prioritized instruction, this became the vehicle through which teacher learning could authentically take place.

Political

Framed within the school-wide instructional focus, instructional rounds inquiry question and the upcoming WASC visit to assess instructional goals and priorities, this process positioned grade level team inquiry cycles as a form of action research that looked into what it means to integrate language and content in classroom instruction. Most importantly, members of the team requested the need for this inquiry approach in order to engage in a more structured process to discuss instruction and teaching practice with attention to feedback, follow- up, and consistency. Thus, this design study utilized grade level inquiry teams as the setting for exploring and socializing current language practices in content area instruction.

Social

To enact this study, structures of peer visits or video observations, providing feedback, the existence of inter-disciplinary team meetings, and implementation of certain ELD strategies must already be in place in the school. This study assumed that teachers in the grade level team already possessed a positive team dynamic and collegial culture based on prior needs assessment. A few of the teachers had been working together for the past three years, while two teachers in the large grade level team had recently joined the team and new to the school. There was a level of collaborative norms and high degree of relational trust (Bryk et al, 2012; Blankstein, 2010) already in place. Team dynamics was not the primary focus of this design study. Rather, teacher learning and improvement upon the use of collaborative structures and strategies to examine language and content integration during instruction was the goal of this intervention design. In addition, the intervention design assumed a skilled facilitator to guide the conversation of the team through the protocols.

DESIGN COMPONENTS

There were two main components to implement the intervention and conduct the research: design team meetings and grade team meetings. The total study was executed over a four-month period and was enacted as a co-design approach with members of the Design Team.

Design Team Meetings

The Design Team was charged with constructing the development of various learning activities for the study. This cycle of inquiry approach was co-designed by a team of educators

comprised of the Instructional Coach and myself. The Design Team met weekly to check-in and adjusted the process of the meetings based on meeting observations. Designed activities included student academic data, a list of shared students for small teacher team inquiry, videotaping instruction when needed, facilitating and adjusting protocols, and surfacing sample student work that illuminated the various connections between the focal student, the teacher planned instruction, and the actual lesson implementation.

Grade Level Team Meetings

Since grade level team meetings were already embedded in the 9/10th grade team's schedule, it was best to utilize this pre-existing time to enact this study. The teacher team cycle of inquiry approach to examine current language interventions across 9/10th grade teachers—as well as drawing effective language practices from research—served as a way to critically engage and challenge espoused beliefs and practices surrounding content instruction, especially for newcomer students. The grade level team meetings served as a productive space to safely discuss language development practices currently in place within content classrooms through the use of protocols to guide conversations. Small teacher teams monitored their progress and discussed their learning through the teacher team cycle of inquiry. There were opportunities for the entire 9/10 grade level team to share to the entire group some of their personal learning and further questions for exploration.

SUMMARY

Though willing to engage in discussions around effective instruction for newcomer English learners, the problem was that teachers in an interdisciplinary grade level team lacked the structure to engage in productive conversations on matters around the Instructional Core. This design study addressed explicit language intervention supports that promoted student-to-student interactions in content area instruction. This study aimed to improve upon the current inter-disciplinary teacher team collaborative structures and served to better understand language and content integration within classroom instruction.

In consulting the professional literature to better understand the problem of practice, I referred to the following areas of study challenges of focused instructional inquiry in teacher teams, secondary content area teacher challenges in ELL instruction, and language and content integration. In order to achieve the desired behaviors for teachers to: 1) prioritize team meeting conversations around matters surrounding the instructional core using the teacher team cycle of inquiry, 2) deepen their knowledge and understanding of how to effectively integrate language and content in their own classroom practice in service of improved student outcomes, and 3) gain confidence in their ability to implement lessons that integrate language and content. Thus, in order to effect change and promote new learning, this design study enacted the following change drivers: Intentional use and sequencing of existing school structures and assets; reducing professional isolation by engendering shared accountability; awareness of and addressing specific student learning gaps; and acquiring new competencies and enabling incremental progress to be visible develops a shared understanding of instructional practices that integrates both content and language.

Intentional use and sequencing of familiar school structures and assets to guide teacher collaboration provided an asset-based, teacher-friendly approach to enact learning. Additionally,

high leverage practices and fellow teacher expertise were organized to enable deeper conversations around instruction. Since effective professional learning must integrate various initiatives within the social organization of schooling to promote coherence that translated to collective, discernible changes in teacher classroom practice (Guskey, 1994; Little, 1993), I proposed a teacher team inquiry cycle framework that merged the Instructional Core Model for Teacher Teams centered within adapted elements from the Cycle of Inquiry. Moreover, to reduce professional isolation, we could engender shared responsibility by developing a teacher team's orientation towards a collective and shared goal for improving student outcomes for a focus group of students. Additionally, by being aware of and specifying what students needed to learn or how instruction in a precise skill brought about improvement, teachers could pinpoint learning gaps for students and addressed them in order to gain a deeper understanding of their instruction (Panero & Talbert, 2013). To effectively respond to student learning gaps in both language and content, teacher team inquiry must first focus on a focal student. Lastly, to improve upon the quality of instruction for newcomer students, teachers must change their practice. To promote observable effects via change in teacher practice however, change must be considered as an acquisition of new competencies and an incremental process by individual teachers (Desimone et al., 2002; Guskey, 1994). Making gradual progress visible involved the development of a shared understanding of specific teaching practices that connected both language and content through clear, common definitions of terms and goals.

      Thus, if an interdisciplinary team of secondary content area teachers engaged in a series of learning opportunities that bridged the teacher team Instructional Core to the cycle of inquiry using context based structures while deeply exploring effective language development practices in content area instruction, then teachers would be able to better prioritize conversations around instructional matters and would improve their practice to integrate language and content in service of newcomer students.

CHAPTER 3: RESEARCH DESIGN AND METHODS

INTRODUCTION

In an attempt to understand a phenomenon in a natural setting that helps illuminate problematic educational practices and make effective change, only certain types of research methodologies are appropriate. Unlike experimental research in which treatments need to be controlled and control groups are necessary to measure effects, a different approach for research is necessary for a naturalistic setting in which the environment of the study cannot be controlled. On the other hand, case studies are conducted in naturalistic settings, but they explore and contemplate a problematic phenomenon. Design development studies however are a robust type of research that addresses complex problems in natural contexts of educational practice and devise an intervention in order to improve on a problem of practice. Design studies accommodate ongoing and evolving change processes, yet also afford structured and systematic inquiry.

In a design development approach to research, "a structured process for planning, implementing and evaluating interventions" (Mintrop et al., p. 123) leads to a specific design intervention that would help change behaviors and influence a desired outcome. Design development allows for flexibility but also predictability—through the theory of action—within the design, which makes it most useful and practical for school contexts where consistency is often challenged by unpredictable disruptions, crises or changing priorities. Design development methodology serves to promote a nexus of intuitive, practical understanding and theory-informed solutions, to help structure a research design that is oriented on outcomes aimed at solving complex issues in educational practice. Design development studies have several critical components that support the development of a research-based intervention plan that includes: preliminary assessment and investigations of the problem of practice, a research-informed understanding of a problematic educational practice, a theory of action grounded in research and practical knowledge, empirical analysis, and an action-oriented approach to unclear and often vague solutions. Additionally, design development methodology has similarities with action research methodology in that both methodologies are used to apply practical knowledge.

ACTION RESEARCH

In this section, I describe the aspects of action research embedded in this study. Action research is a methodology that is situated in real-life problems; operates in iterative cycles of problem identification, planning, acting and evaluating; involves changing patterns of thinking and action rooted in well established cultures of organizations and actors; and involves the researcher as an actor within the context (Coughlan & Brannick, 2009). Its aim is to better understand the context and effect change or improve upon the current status of the organization (Coughlan & Brannick, 2009). With the researcher being an active participant and actor in the study, the researcher must consistently be conscious of the tacit assumptions within the organization and guard against the presence of advocacy bias, where the researcher could influence outcomes based on their desire for effect (Mintrop et al., 2016).

As a complement to design development, action research thrives under conditions where participants and researcher engage in organic interactions; yet this poses the challenge of conflating roles for the researcher within the study as the planner, implementer and evaluator. To safeguard for validity and rigor, action researchers must critically reflect and engage in activities such as journaling, checking assumptions with participants and collaborating with impartial third parties (Mintrop et al., 2016) and through processes such as finding discrepant information, clarifying bias through member checking and peer debrief, and triangulating different data sources (Creswell, 2009).

Though action research has similarities with design development research, design development studies has specific qualities that differ from action research. In the next section, I describe the qualities of design development and the rationale for its selection as the appropriate methodology for this study.

DESIGN DEVELOPMENT

Design development is the appropriate methodology for this research design because when exploring how an interdisciplinary team of teachers prioritizes instructional conversations during team meetings, it exists within a specific context that is often unpredictable; it requires an iterative approach to developing new, innovative solutions that often stems from prior learning and experiences. Furthermore, a co-design with a team of teachers, through design development, facilitates a structure that allows for a systematic, collaborative approach to inquiry.

The context of this research study operates within an interdisciplinary team of teachers who are charged with a specific cohort of newcomer students. This team setting is conducive for design development studies since the conditions have some degree of predictability, but with variability that comes with the decisions of how inter-disciplinary teams are constantly influenced by competing demands from administration, reactions to crisis, immediate student needs, and pressing deadlines. Often administrative duties and logistical mandates become the priorities for teacher teams, leaving instructional work deferred or postponed despite the willingness and eagerness of the teacher team to engage in learning about each other's classroom practices. Additionally, the searches for solutions around how teacher teams can prioritize instructional discussions during meetings have neither clear approaches nor explicit guidelines for effective enactment. As teachers grapple with finding the time to prioritize conversations about integrated language and content instruction and finding the ways in doing so effectively, design development becomes an even more apparent and logical methodology to utilize since the process does not follow a linear path, rather an intricate, "learn-as-you-go" exercise that requires multiple trials and iterations (Mintrop et al., 2016). In the following sections, I describe components of Design Development that includes an impact data that looks at both baseline and outcomes, a process data that helps explain the impact of the intervention and the identification of treatment effect.

The purpose of this study is to develop a robust intervention design that helps an inter-disciplinary team of teachers prioritize conversations about teaching and learning during team meetings, leverage effective classroom practices and structures that exist within the school, and develop a deeper sense of language and content integration during content area instruction to meet the needs of newcomer English language learners.

SELECTION OF RESEARCH PARTICIPANTS

For this study, the selection of participants were based on a purposeful "convenience sample" (Creswell, 2007), because the selection of participants was given by the context of the organization. Since the purpose of this study was partly to change the organization, it was important to include relevant and key actors that were capable of effecting change and were enabled to act those changes.

In my study, I included the instructional coach as a co-designer of this research. As an attending member of this interdisciplinary team of teachers, I was immersed in the team's norms, structure and responsibilities. Since I mostly served as a resource for the team, I was afforded a particular status within the team—being informally designated as the "intellectual leader" (Mintrop et al., 2016).   Explicit agreements that were negotiated with the instructional coach included her understanding of her role as "co-designer" in the study and how the teacher team approach was geared to be action oriented. Consistent reminders that this study was a collaborative endeavor to learn more about how the team could critically engage in improving their instructional practices and professional learning alleviated any hesitation or doubts in participating in this study.

UNIT OF TREATMENT

This study focused on three teachers. Two teachers were in their second year of teaching, while one was in her fourth year of teaching in the school. All teachers, despite teaching different content area disciplines, taught newcomer students; though some taught at the school longer than others. Additionally, three of the selected teachers were in the same small teacher team (Team 1) and they taught the same subgroup of newcomer students and thus had an awareness of the common goal of English language development as part of their instructional practices. By focusing on the three teachers as the unit of study, this design development research examined how an inter-disciplinary team of teachers organized themselves to work towards improving their grade level team conversations about how to best integrate language and content within their instruction.

DATA

In this section, I describe the types of data that were used and analyzed. For the purpose of this study, a mixed methods approach was conducted to collect data. Both quantitative data and qualitative data were included for data collection.

Types of Data

Quantitative data provides a distilled interpretation of a complex situation to discrete and few variables, which are categorized and standardized. Since the nature of quantitative data is contingent upon how the researcher has defined the variable, they are limited in providing an understanding of complex change processes. However, since change processes are fluid and unpredictable, it requires a more flexible quality in data. Change processes are meant to promote learning; since learning is emergent, this design study needs to be able to capture the inchoate quality of a learning process. Qualitative data would be the appropriate choice to understand the

learning process since they allow for much more variability. Qualitative processes are much more powerful for capturing data for change processes as they can help explain the context within complex situations and how it is affected by various factors. Since qualitative data tends to be narrative, it captures a broader scope of factors and variables for worthy consideration.

Design development research serves two purposes —to assess intervention impact and to understand the implementation process. Thus, there will be two categories of data that will be collected throughout this design development study: impact data and process data.

Impact Data

By comparing various baseline assessments regarding beliefs, attitudes or behaviors of the design study participants using similar dimensions and standardized metrics, we can assess whether the intervention influenced the outcomes through the impact data (Mintrop et al., 2016). In design studies, baseline data are collected, analyzed and compared to outcome data to evaluate the intervention's effectiveness and to qualify conclusions that the effect that occurred was the result of the intervention implementation. Since design development studies hinges on outcomes, impact data contains elements that includes clearly delineated standardized indicators, quantifiable and observable metrics around specific categorized behaviors or tasks, and anchored outcomes. In other words, "impact data should be fixed" (Mintrop et al., 2016) in order to guard against bias.

Collecting baseline data on teachers' beliefs, attitudes and practices regarding English language development strategies and subject matter content knowledge, their ability to assess successful lesson implementation and apply actionable next steps to their own practice, their current understanding of effective language and content integration and practices for English learners, and their facility in analyzing student work, teacher moves and student cues particular for newcomer English language learners were part of measuring the impact of this research design study. Since participants varied in levels of skills and expertise in language and content integration for newcomer students, as evidenced from pre-assessment observations and survey, using multiple sources of baseline data created a reliable measure for individual participants.

For the impact data (see Appendix B), I used a performance task with accompanying student work and an interview protocol (see Appendix B, Table B.1) with a series of standardized questions (Spradley, 1997). The performance task (see Appendix B, Table B.2) engaged teachers to observe and evaluate a video segment of a newcomer classroom instruction. For impact metrics, comparing the growth in at least some of the dimensions between the baseline data and post-intervention data helped assess the actual impact of the research design. Rubrics were used to analyze pre-intervention and post-intervention performance tasks (see Appendix B, Table B.4 and Table B.5) and to compare pre-and-post-survey in order to standardize the metrics necessary to compare effects of the intervention design (see Appendix B, Table B.3). I utilized the following questions for my performance task rubric:

- *What strategies that promote student-to-student interaction did the teacher employ?*
- *What main concepts (subject matter content) did the teacher attempt to teach?*
- *What language objectives were evident in the lesson?*
- *When you look at the student work generated, how successful was the teacher in implementing the language objective within the lesson?*

- *Considering the language objective, how did the teacher successfully or unsuccessfully teach the main concept in the lesson using the ELD strategies that promote student-to-student interaction?*
- *How can you tell from looking at the student cues in the video that it was the specific teacher moves to integrate language development that contributed to deeper content knowledge and/or language development?*

These questions aimed to assess the effects of the intervention design in the following critical areas:

- *ELD strategy competence* - Identification and understanding of ELD strategies.
- *Subject matter content competence* - Identification of subject matter content with regards to both domain and topic knowledge.
- *Student artifacts to teacher instruction connection*- Understanding of the connection between teacher instruction and generated student artifact.
- *Teacher lesson implementation to subject matter content instruction using ELD strategies connection* - Understanding of the connection between teacher lesson implementation to the ELD strategy used to teach the subject matter content
- *Teacher and student actions to lesson outcomes connection* - Understanding of the connection between student actions and teacher actions towards lesson outcomes.

Additionally, the use of interview guides helped to carefully decide on how to best utilize the very limited time in an interview situation, particularly in a school context. I used the following questions as part of my structured interviews:

Table 3.1: Impact Data Pre-Post Interview Questions

In your own words, describe your idea of language and content integration.		
	On a scale of 1-5, to what extent are you confident in…	**Probe**
Shift in Language Content Integration understanding	Incorporating newcomer students' prior knowledge and experiences into your lesson planning?	Describe some examples of how you have tried to incorporate newcomer student's resources and experiences in your lesson planning/lessons.
	Analyzing your subject matter content standards to gain insight about the language demands for newcomer ELs?	Describe the instructional supports that you've tried in your lessons to support the language demands of your content.
	Identifying some unique features of language (such as nominalization and passive voice in science texts) within your content area?	Describe some unique features of language within in you subject matter content.
	Determining supports for newcomer ELs in your content area? Using supports for newcomer ELs in your content area?	Describe what educators should consider when they determine and use supports for newcomer students in your content area.
	Providing opportunities for newcomer EL students with varied language proficiencies to engage in higher order thinking?	Describe how you have tried to create opportunities for newcomer EL students to engage in higher order thinking.
Shift in	Implementing specific strategies to create a language-rich classroom?	Describe specific strategies that you have tried to create a language-rich classroom.
	Helping newcomer students become aware of language	Describe how you have tried to help newcomer

functions in your content discipline? Helping newcomer students use language functions to make meaning in your content discipline?	students use language functions to make meaning in your content area.
Balancing instruction to ensure newcomer students practice language use in various contexts and experiences?	Describe ways that newcomer students have practiced language use for various contexts in your class.
Communicating language expectations to newcomer students? Providing newcomer students with feedback on their language development?	Describe how you've communicated language expectations to newcomer students and provided feedback on their language development in your class

In using standardized interviews, I solicited the same information from each person since the questions for all participants were consistently the same. Writing these questions in advance in preparation for the interview was necessary and the reason for selecting this approach was to help minimize the factors that may influence bias from the interviewer as well as making for data analysis a much more structured and streamlined endeavor. To guard against unintended team dynamics, the pre- and post-interview helps us better understand the strength of the team group dynamics by assessing certain qualities of the group in regards to teacher collaboration, and participants' perceptions of the effectiveness of teacher collaboration and team structures. This was captured during team meeting observations.

Process Data

Unlike impact data, process data are centered within more qualitative approaches that capture the complex process and unpredictability of a naturalistic environment. Because design development studies have a formative approach to the research design, the role of the process data is to capture and to help explain how the impact data manifested. It can help clarify unforeseen changes, unexplainable discrepancies, or unintended adjustments throughout the intervention implementation. Process data aims to elucidate the meaningful, salient patterns and occurrences throughout the study. Moreover, process data can help guide adjustments to the intervention design to help determine the design's effectiveness (van de Akker, 1999). By using qualitative research methods to collect the process data, it allows for flexibility in the design to make appropriate alterations throughout the intervention period that takes into account the fluid context in which the study is situated. In this design study, since teachers reflected on how they could better prioritize team meetings for instructional conversations, their growth in better understanding language and content integration to serve newcomer students, and their facility with navigating emerging challenges during team meetings, the use of qualitative methods helped me understand if my understanding of the change process was accurate (Creswell, 2007).

For gathering process data, I followed a structured protocol and a series of interviews with pre-determined questions, team meeting observation notes, written self-reflections, and audio recordings that illuminated the current ways in which an interdisciplinary team of teachers made sense of and shared pedagogical practice for instructional improvements to further their professional learning. Though guided by protocols and structures the devised questions were a mixture of structured and open-ended types. Open-ended questions were used for the process data to allow for probing and contextual questions that could provide further insight to the beliefs, values and feelings of participants (Spradley, 1997). This study utilized interviews, audio notes, written reflections and observation data to gain insight to teacher team understanding of

language and content integration and the effectiveness of the structures implemented. To bridge the change drivers of this study (see Diagram 2.1) for the purposes of collecting data, an overview of the process data is summarized below.

Table 3.2: Process Data Overview

	Activity	Process Data
PHASE 0	1	• Audio recording and observation of team meeting to be analyzed according to level of group development. (Use of Observation guide.)
	2	• Audio recording and observation of team meeting selecting student subgroup to be analyzed according to teachers' reasoning for student classifications based on English language level and subject matter content knowledge. (Use of observation guide.) • Brief summary memo.
PHASE I	3	• Audio recording and observation of teacher team meeting on video analysis activity to be analyzed according to patterns they saw in the video regarding effective ELD teaching practices. (Use of observation guide.) • Brief Summary memo.
PHASE II	4A	
	4B	• Audio Recording and Observation of team meeting to be analyzed according to depth of understanding and presenting teacher's skill in describing the main points of their Unit of Study and team feedback. (Use of observation guide.) • Brief Summary memo.
	5	• Collect a copy of completed teacher observation guide.
PHASE III	6	• Audio Recording and Observation of team meeting to be analyzed according to the depth of understanding of teachers' skill in identifying and connecting successful teacher moves, student cues and student work. (Use of observation guide.) • Brief Summary memo.
	7	• Audio recording and observation of team meeting to be analyzed according to group development, learning process and language content integration. (Use of observation guide.) • Interview with first presenting teacher about their lesson enactment went and whether their planned main concepts were taught. Presenting teacher describes their experience engaging in the process. (Use of interview protocol) • Summary memo.
		• *Activity 4B, 5, 6 and 7 would repeat for all members of the teacher team. A post-interview will be conducted for each presenting teacher about their experience in engaging in the process.*

Since this study included an action research component where the researcher was immersed in the context of the study, the degree of reducing data was desired. The researcher must account for the unpredictability of the intervention stream that made data collection complex. Since data was coming from an uncontrolled setting, the process data collection must be fluid enough to be able to encapsulate the ongoing effects of the intervention design and the unexpectedness that could ensue (Mintrop et al., 2016). The most important part of research, particularly in design development studies, was the data reduction: As the researcher, I did not aim at collecting as much data as possible; rather I aimed for a parsimonious way of data collection. Data reduction was imperative since I was an actor in the study and too much data would be overwhelming. Though subjective and limited, reducing data sought to streamline multiple metrics of the same outcome.

The design development methodology left room for revision in the design that allowed for possibilities of substantive, emerging insights during the intervention implementation. By being deliberate in designing a plan for the process data collection, by using open-ended questions, and by being attentive towards possible consequences that may surface from the

design study, specific research relationships and data analysis was further advanced. Furthermore, a structured, yet flexible design for data collection promoted validity of the research findings.

In summary, this study examined teachers' pre- and post beliefs about team meeting structures, dynamics and prioritization, and a pre-and-post performance task for the impact data (See Appendix B). Process data were gathered through teacher interviews about their perceptions about team meetings, team meeting observations and audio recordings, self-reflections as well as a semi-structured ethnographic interviewing approach (Spradley, 1979) with select participants (see Appendix C).

DATA ANALYSIS

In order to analyze the baseline data, survey questions and pre-intervention interview transcriptions were coded for indicators (Miles and Huberman, 1996); recording the presence or absence of these indicators were eventually used as the initial data was compared to the post-intervention data. For the reason that codes are astringent (Miles and Huberman, p. 58), vary in levels of analysis that ranged from descriptive to inferential, and could occur in various times during analysis, it was critical to include marginal notes, summary sheets and constant revisions and revisiting of initially developed codes from the knowledge base along with salient patterns or themes that emerged as new codes during the analysis process.

RELIABILITY

Through the use of both quantitative and qualitative research methods, I established reliability in this study. The use of clear data collection instruments, pre-defined, standardized metrics and structured planning, and clarity around observable behavior or actions necessitates for determining the impact of the study (Creswell, 2009). Reliability standards are most conducive to controlled experimental studies; in design development studies however, following clearly delineated, pre-planned procedures and theory-guided processes of data collection in conducting the study reinforces reliability. It is through the precision of these procedures and processes that bolster the reliability in a design development study.

For the context of this study, reliability was ensured through the pre-determination of the various metrics and the focus of meeting observations. I planned to execute a series of 17 sessions over 23 hours utilizing clear metrics such as participant interviews, collecting data on their beliefs, attitudes and understanding. Observation process data were collected during team meetings with a focus on group development, articulation of student cues, teacher moves, language and content integration, subject matter content, ELD strategies and student related artifacts. Lastly, I collected qualitative data from participants through interviews and self-reported reflections. Recognizing that self-reported information was a least reliable form of data, I anticipated the caution for having participants express their espoused beliefs that may or may not be aligned to their own self-conceptions. Rather participants would disclose a belief that was more aligned to a perceived set of norms. By consulting with a critical friend regarding the interpretations of the collected process data, this served as a process check throughout my study.

VALIDITY AND CREDIBILITY

In research, a rigorous study has high validity when theories and conclusion are warranted by data. In design development studies, internal validity relies on evidence that makes plausible connections between process and impact. Internal validity is strong when data can accurately show how the intervention contributed to the results of the study and when this plausible connection is undergirded by a theory of action. For my design study to have high internal validity, as the researcher, I needed to create a compelling, logical argument between what was executed during the process and the resulting outcome as evidenced through the impact data.

Abstract ideas and concepts need to be operationalized into observable behaviors and actions. In doing so, through the selection of metrics, dimensions are directly related to the theory of action while the tools and instruments are connected to the research knowledge base. For my study, the survey, interview questions and performance tasks were designed to elicit responses that were derived from the theory of action. I used interview questions, survey, and performance task indicators to ensure construct validity.

Typical experimental research faces the threat of external validity because participants have to operate and comply within specified constraints and conditions, which is unlike the unpredictability of the real world. Because this study was situated in a naturalistic setting, as the researcher, I had very little or no control of the design space which established high external validity. However, a design study's external validity is only limited to context specificity (Mintrop et al., 2016); this means that a design research study has validity only to the extent of organizational settings with similar circumstances and conditions. The purposeful design to include pre-existing structures and assets within the context of my study ensured the relevance of practices that teachers currently operated within. Acknowledging that my participants were active actors within the school context, the practical design of the intervention and the clarity of the metrics used were connected with their current work environment and attuned to participants' reality. Thus, results from this study embodied the reality and practical implications to school settings that shared similar conditions and structures as the context of this study.

TRANSFERABILITY

In research, generalizability is indicated when inferences can be made from a select or random sample to the wider population for which the sample is representative. This can be done because humans, as social beings, engage in predictable patterns of behaviors and beliefs. Findings from design studies cannot be generalized since they are context specific. However, since design development studies have systematized methods and procedures, there are principles and elements within the design that could be transferred to similar contexts within shared parameters. This transferability aspect of design development studies is unique in that findings from design studies can provide other practitioners in similar contexts facing the same problem of practice to utilize features and elements of the design that can help inform and improve upon their practice. In this study, for example, the design principles would be transferable to similar educational organizations where inter-disciplinary team structures, peer observation systems and designated team meeting time existed, and whose secondary teacher team members were charged with developing the English language for a cohort of newcomer students. Additionally, the context assumed that inter-disciplinary teacher teams already had a

pre-established positive collaborative culture and were motivated to discuss teaching and learning given structured time and spaces. Lastly, it required a skilled instructional coach to support the work of the teacher teams.

Rigor, Threats, and Bias

Due to the complex nature of the context and the creative, innovative approach to the intervention design, the reliability of a study is threatened. However, meticulous documentation of adjustments during the process, iterative corrections of the instruments used for data collection, and a conscious rationale around modifications mitigates these threats. Additionally, the threat of research bias is unavoidable, especially in action research and design development studies (Mintrop et al., 2016). A researcher's solution orientation may skew the process or perception of the identified problem. In design research, "observer-expectancy and advocacy biases" (Mintrop et al., p. 144) are important bias considerations since such biases promote the researcher's proclivity for demonstrating both impact and effect. To guard against these threats for rigor and bias, meticulous ideation and iterative problem framing is imperative. Additionally, compartmentalizing the design, implementation, and evaluation aspects of the study further decrease bias. In this study, I guarded against biases by engaging in a co-design process with the instructional coach and teachers, as well as having the instructional coach facilitate during the study as an active participant or served as the observer during the team meetings. This approach allowed me to focus either as the observer during the implementation process or as an active facilitator during the meeting. Then, I re-entered as an actor during the evaluation phase. Moreover, engaging in constant self-reflection that included marginal notes and summary sheets after collecting data during the intervention process and consulting with a critical friend during the data collection process alleviated the propensity for bias.

CHAPTER 4: FINDINGS

INTRODUCTION

This chapter presents the findings from my design study. In the following sections, I provide an analysis and synthesis of the collected impact data and process data. My intent for this design study was to develop a co-designed sequence of intervention activities that engaged three secondary teachers who shared the same subgroup of students to improve their classroom instruction and understanding of language and content integration. I used pre and post structured interviews as well as a pre and post performance tasks to gauge the effect of this study. I collected streams of process data that provided a narrative of the ways participants learned about language and content integration to see if the effects documented by the impact data could be explained through the intervention.

I gathered, analyzed, and synthesized observations, audio recordings, written artifacts, and informal interviews related to eighteen intervention activities. By surfacing the critical incidents during the intervention process, I provided an analysis of plausible interconnections between the outcomes and the intervention process. In the following sections, I first present my analysis of the impact data for the focal participants, then I present the process data for each of the activities in my intervention design. It is important to note the aspects of the activities and participants' learning from the activities within the process data that helped explain the results from the impact data.

IMPACT DATA

I begin my data analysis by presenting both the baseline and outcome data. Pre and post interviews focused on teachers' shift in language and content integration understanding and teachers' shift in language and content integration in classroom practice. The pre and post performance task aimed to assess the following critical areas: ELD strategy competence; Subject matter content competence; Identifying language objectives in a lesson; Connecting student artifacts to teacher instruction; Connecting teacher lesson implementation to subject matter content instruction through the ELD strategy and; Connecting teacher and students actions to lesson outcomes.

Next, I present both impact data tools (see Appendix B): Pre-Post Structured Interview Protocol (see Appendix B, Table B.1) and Pre-Post Performance Task questions (see Appendix B, Table B.2). Note how the questions are organized in two dimensions: Shift in Language and Content Understanding and Shift in Language and Content in Practice. The Shift in Language and Content Integration Understanding Dimension referred to teachers' knowledge of how to incorporate students' prior knowledge and experience in lesson planning. This included teachers' understanding of the content subject matter they taught, and their ability to fully articulate the language demands, functions, features and objectives within their content area. This dimension also encompassed how teachers provided exemplary supports that should be considered and employed for students and the ways in which higher order thinking was promoted for students through teachers' lesson design process. Meanwhile, the Shift in Language and Content Integration in Practice Dimension referred to teachers' ability to effectively employ specific

strategies and teach language functions in ways that promoted language development and practice language in teaching content. Additionally, this dimension considered teachers' capacity to distinctly connect student produced artifacts to classroom instruction that included student and teacher actions, as well as teachers' ability to effectively communicate language expectations and next steps for students.

DATA REDUCTION

In order to deeply understand the growth of teachers' understanding and practice of integrating language and content instruction within these two focal dimensions, I analyzed both quantitative self-reported ratings and qualitative descriptions. Quantitative metrics were based on a 5-point Likert scale that assessed teachers' confidence while qualitative information was gathered from teachers' responses to the probing questions that followed their self-ratings. To gauge the overall impact of the design intervention, the structured interview protocol was administered once before the intervention and once after the intervention design activities. I then utilized a 5-point rubric (see Appendix B, Table B.3) to make my own evaluation of participants' self-ratings based on their extended responses from their pre and post interviews.

Collected impact data was utilized to corroborate the data from the structured interview findings. To evaluate participants' pre and post performance tasks, I created two 4-point rubrics—one for a literacy performance task (see Appendix B, Table B.5) and another for a math performance task (see Appendix B, Table B.4). Performance Indicators 1, 2 and 3 corresponded to the focus on the shift in language and content integration understanding, meanwhile performance indicators 4, 5, and 6 corresponded to the focus on the shift in language and content integration in practice. Humanities teachers, those who teach English Language Arts or Social Studies, were administered the literacy performance task and were evaluated using the literacy rubric while Math and Science teachers were administered the math performance task and were evaluated using the math rubric. The performance tasks and rubrics corresponded to observed videos of a math lesson and a literacy lesson, respectively. In designing this rubric, I consulted other rubrics that assessed language and content integration, specifically Specially Designed Academic Instruction in English (SDAIE) and World-class Instructional Design and Assessment (WIDA) resources, and drafted the rubric in consultation with a critical friend. My critical friend, Joanna Yip, is a fellow educator from New York City who has an extensive background in teaching newcomer student populations and whose dissertation explored the educational histories of newcomer immigrant youth.

Finally, I analyzed both similarities and differences between participants' self-ratings and my rubric ratings to present my overall ratings for each of the two dimensions: shift in language and content integration understanding and shift in language and content integration in practice. Based on my overall ratings of these two dimensions, I then determined the participants' learning from my intervention and gave a holistic rating based on the participants' ability to integrate language and content along a continuum of weak integration to strong integration (see Diagram 4.1). The language and content integration continuum provided several descriptors that ranged from 1-poor, 2-minimal, 3-sufficient, 4-above average and 5-high integration. A holistic rating towards 1 meant a weak integration while a holistic rating towards 5 meant a strong integration of language and content in participants' overall instruction based on their ratings from the two aforementioned dimensions.

Diagram 4.1 Continuum of Integration

Holistic Rating of [ ] Integrated Language and Content Instruction

Weak Integration				Strong Integration
Poor 1	Minimal 2	Sufficient 3	Above Average 4	High 5
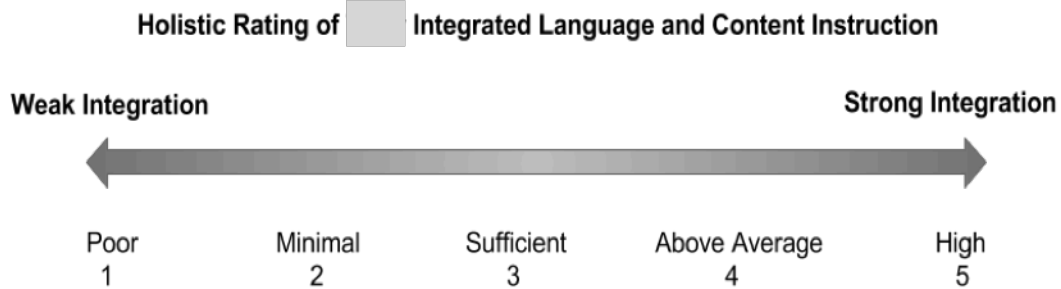
STRUCTURED INTERVIEWS AND PERFORMANCE TASK FINDINGS

For each participant, I first present their shift in language and content integration understanding using the pre and post interviews (Questions 1-6, 13), performance tasks (Performance Indicators 1-3), and interview data. Next, I analyze and discuss the variance between participant and researcher ratings and interview data in the first dimension of language and content integration understanding. Then, I present their shift in language and content integration in practice by again using the pre and post interviews (Questions 7-12), performance tasks (Performance Indicators 4-6), and interview data. Afterwards, I analyze and discuss the variance between participant and researcher ratings and interview data in the second dimension of language and content integration in practice. Finally, I explain and holistically rate participant's combined understanding and practice along a continuum of weak to strong integration of language and content.

ALLIE IMPACT DIFFERENCE (BASELINE AND OUTCOME DATA)

Allie's Shift in Language Content Integration Understanding (Q1 – Q6, Q13 and P1-P3)

Table 4.1: Allie's Pre- and Post-Interviews Self-Ratings

	Allie	
	Pre	Post
Q1	4.5	5
Q2	4	3.5
Q3	4	3
Q4	5	5
Q5	5	5
Q6	3	4

Allie Pre-Post Interview (Self-Rating)
Shift in Language and Content Integration Understanding
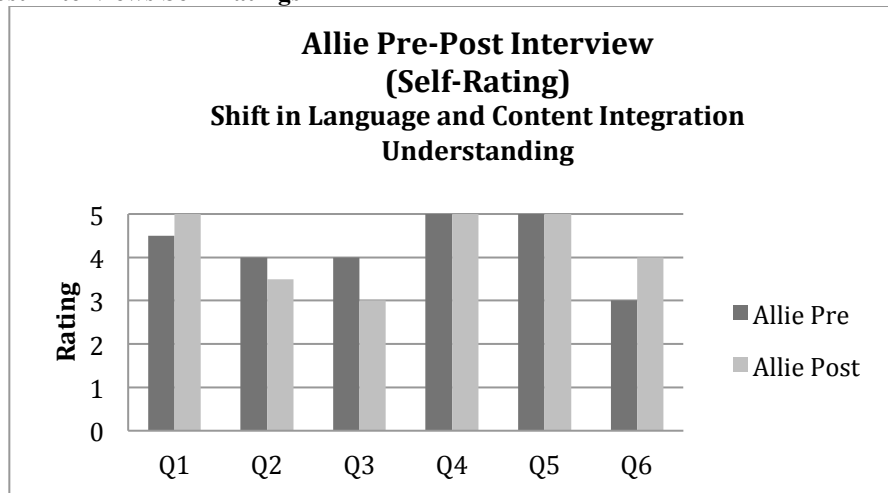
Table 4.2: Allie's Pre-and Post-Interviews Researcher Ratings

	Allie	
	Pre	Post
Q1	4	5
Q2	3	4
Q3	3	4
Q4	3	5
Q5	4	5
Q6	2	3
Q13	3	3

Researcher Pre-Post Interview Rating
Shift in Language and Content Integration Understanding

Rating (Q1: Allie Pre 4, Allie Post 5; Q2: Allie Pre 3, Allie Post 4; Q3: Allie Pre 3, Allie Post 4; Q4: Allie Pre 3, Allie Post 5; Q5: Allie Pre 4, Allie Post 5; Q6: Allie Pre 2, Allie Post 4; Q13: Allie Pre 3, Allie Post 3)
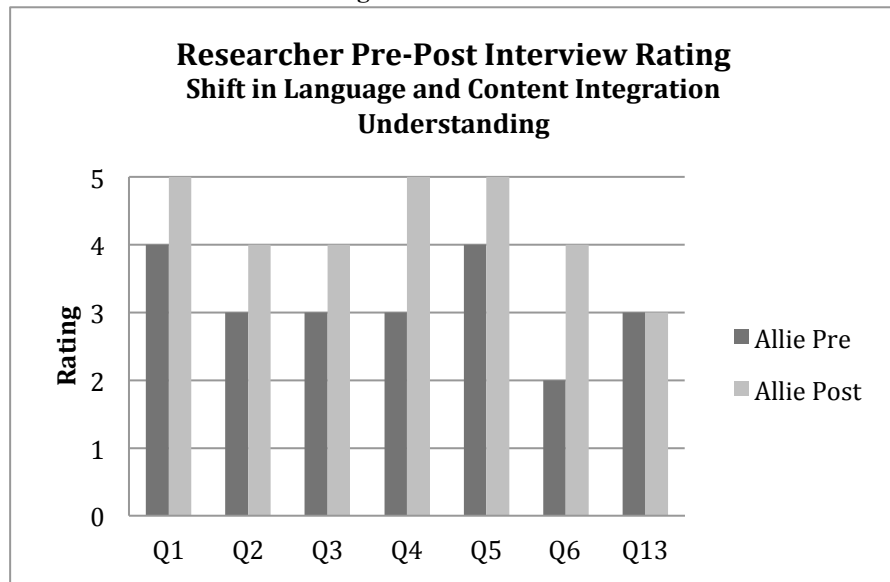
Table 4.3: Allie's Pre-Post Performance Task Researcher Ratings (P1-P3)

	Allie	
	Pre	Post
P1	4	4
P2	2	3
P3	2	3
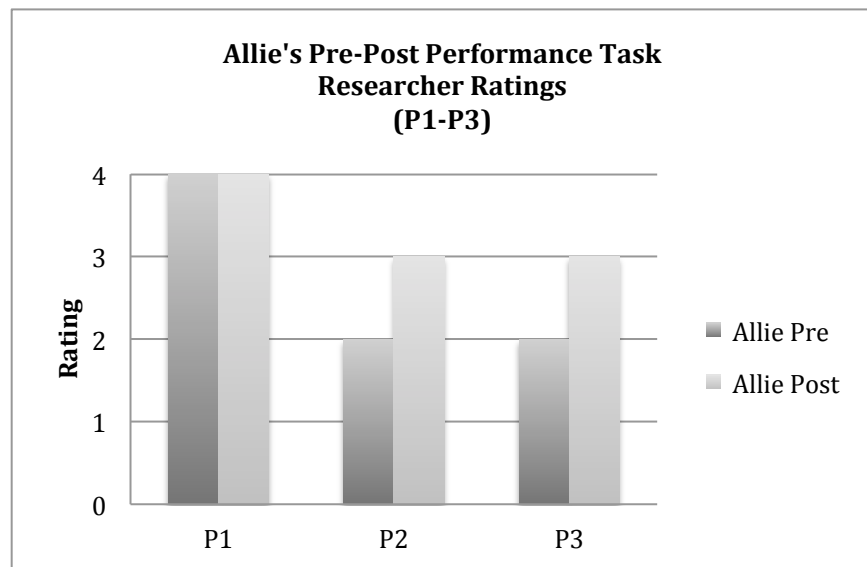
Allie's Pre-Post Performance Task Researcher Ratings (P1-P3)

Rating (P1: Allie Pre 4, Allie Post 4; P2: Allie Pre 2, Allie Post 3; P3: Allie Pre 2, Allie Post 3)

Variance between Allie's Self-Rating and Researcher's Ratings regarding Shifts in Language and Content Integration Understanding

There was variance in how Allie rated herself as compared to my rating of her shift in understanding on the rubrics. On average, she rated herself higher by one point compared to how I rated her interview responses. Particularly on Questions 2 and 3, she rated herself lower in her post-interview than her initial interview. However, as I will argue Allie actually showed growth in those two questions based on her responses around analyzing subject matter content standards to gain insights about language demands and identifying unique features of language within a

content area. Allie interestingly mentioned that, *"I think I was lower at the beginning of the year,"* which reflected she thought she had scored herself lower before the intervention activities started. Allie's largest gain was from my rating of a 3 to a 5 in her ability to determine supports for newcomer students; this was in contrast to her self-rating where she consistently rated herself a 5 in both pre-and-post interviews. In addition, her performance ratings showed no growth in her ability to identify ELD strategies but demonstrated growth in her ability to identify subject matter content being taught and the language objective in a lesson.

When asked to define language and content integration, Allie provided a more nuanced explanation of how she defined the concept of 'language and content integration' during her post-interview. In her pre-interview, she mentioned the explicit teaching of academic vocabulary, the task students were asked to perform (such as analyze) in order to deepen students' content understanding, and the language required to perform the task. Allie described language and content integration as:

> *"It is explicitly teaching words in academic language constructions that allow students to analyze content in a deeper level and then articulate their thinking and their analysis."*

However, the post-intervention gave a more specific description of what Allie meant when she said explicit teaching and then connected this to repeated structures and multiple opportunities for students to practice language, as well as the language goals within the study of the content. She articulated this nuance as:

> *"For me as a teacher of newcomers… it means picking a grammatical routine in the English language and teaching it and giving them [students] the practice to use it over and over again… which I don't think it was before… I think that that's how I would define it is like… examining content in a way that lifts up a specific way a specific construction or rule of English…"*

My assessment of Q13, showed growth in Allie's ability to describe her conception of language and content integration understanding from a 3 to a 4.

Allie's Shift in Language and Content Integration Understanding Discussion

I found three consistent themes in Allie's self-ratings: 1) analyzing subject matter content standards to gain insights about language demands, 2) identifying unique features of language within her content area of Ethnic Studies, and 3) providing opportunities for newcomer EL students with varied language proficiencies to engage in higher order thinking. In her pre-interview, Allie acknowledged that:

> *"There's not actually standards for Ethnic Studies Content Standards… the Ethnic studies curriculum is concept based… so there's six units that are six large broad concepts and then you can kind of pick what's going on… what you want to sort of focus on that's related to that concept."*

In her pre-interview, she further elaborated on how she planned her units and lessons:

> *"The way I approach each unit is like ok so with the concepts… what's a project that's going to demonstrate their [students'] understanding of the concept and then… once I*

know the project, I list… what are all the words and sentence frames that they're going to need to know to be able to create… to generate this project… and then also what are any sort of… what's kind of a grammatical construction or something that I want to focus on that they need to be able to practice so it's not just knowing sentence frames but there's actually an understanding of the mechanics of the language."

She mentioned the importance of developing academic vocabulary and spending considerable time to access the content (a story, an event, or a concept) as a way to engage students and *"make it easier for the teacher."* However, she further articulated that:

"In traditional social science courses, you take the concept and then you give story examples… they [newcomer students] really struggle with that and sort of holding that concept without that sort of personal connection…"

Her pre-interview comments revealed her articulation of both language and content during her process of unit and lesson planning in detail, especially her emphasis on students' ability to demonstrate their *"understanding of the concept (in Ethnic Studies)"* and their *"understanding of the mechanics of language"* through key vocabulary study, grammar applications, and explicit use of language to analyze the content.

During her pre-intervention interview, Allie alluded back to developing academic vocabulary from her pre-intervention interview, but she expanded on that idea during her post-interview and included that:

"On top of knowing the vocabulary like… know a specific sentence structure that you want them [students] to be able to produce by the end, verbally and written… and explicitly teach it give them lots of practice with it."

Furthermore, when asked to describe some unique features of language within her subject matter content, Allie noted the *"isms"* in History;" which she described as *"like the difference between 'ism' and 'ist'—racism, sexism, racist, sexist… and really calling those out and what "ism" means as a suffix."* Her articulation of unique features of language within her subject seemed to emphasize word study within the academic vocabulary of her content.

During her post-intervention interview, Allie realized that:

"A lot of history texts have like kind of complex like multi-clause sentences." She described the way she addressed this during instruction as*, "a lot of times I change it [the complex history text] for the really beginner students just cause its like I rather have them get the words than have to parse out funky sentence structure."*

She also said that though she did not get to address this issue in her instruction this year, she added a reflection:

"I was noting that next year…let's really focus on commas and commas are a clue to help you parse things out [in historical texts] you know…, I think its just like the complexity of sentences [in historical texts] but I'm not super… haven't gotten there yet."

Her post-interview revealed a clearer articulation of how and what students should be able to produce in order to discuss the content in her class, in addition to her developing understanding

of the language demands of historical texts and how she typically modifies text to make it accessible to her students. Allie surfaced the text complexity associated with historical texts and how to think about teaching this skill to students so that students could better understand the historical content through studying sentence structures in historical texts, such as the use of commas in historical writing as context clues.

When confronted with the question on how she provided newcomer students with opportunities for higher order thinking, she mentioned in her pre-interview: *"it just takes a lot of time to differentiate."* She explained it further as the difficulty in finding *"additional reading [for] early finishers… but that takes time and I think… occasionally adding on extra questions... deeper questions here and there I have done, but then I always… every student should have a or higher thinking question so I don't want to only give them to my more intermediate students…"*

In her post-interview, Allie articulated her confusion around what constituted as higher order thinking for newcomer students versus General Education students. She raised this as:

> *"I get confused myself when it comes to… what counts as higher thinking for newcomers because… like for instance, I have been doing cause and effect right now which I would argue… which I think most people agree is higher order thinking. They're [Newcomer students] having [to] finding quotes in texts to support the idea that it was civil disobedience of the people… [People] had agency, but then they're also writing summaries… and I think some people would go, 'That's not higher order thinking!' but when it comes to actually put piecing together a sentence like a complex sentence that says who, what, when, where, why, and how the how is really tricky... Doing it in a new language and putting it in the right order I would argue is higher order thinking [for newcomer students]."*

Allie struggled with the notion of higher order thinking and connected this concept to "Bloom's Taxonomy." She then questioned whether Bloom's Taxonomy recognized English language development as well, and not just for content understanding. She articulated this struggle as:

> *"This gray area of like higher order thinking for English learners… that I'm like… I don't know… and so I don't and that's like things like that like I can't… they're not going to do… they're not going to really get the cause and effect unless they have the summary first right… most people would call that like middle part of Blooms [Bloom's Taxonomy] like not really like higher order thinking but I think for newcomers it is…"*

My ratings of 2 and 3 on her pre-and-post interview, respectively, reflected this surfaced challenge as a growth. Her self-ratings seemed to be attributed to her struggle to reconcile what constituted as higher order thinking when it came to newcomer students. She referred to Bloom's Taxonomy as the types of skills and understanding she was asking her students to do as far as content was concerned, but the English language development was not accounted for within this framework. The Bloom's framework assumed that students had acquired a high degree of English language level in order to engage in higher order thinking.

That said, I rated Allie's Overall Shift in Language and Content Integration Understanding a 4. She displayed growth in her ability to utilize newcomer students' assets within her instruction and planning as well as addressed both the content and language demands within her planning of instruction. In addition, her developing understanding around text complexity as it applied to historical texts was another positive shift in her language and content

integration understanding. Also, she provided further clarity on the functions of the supports that she used in her instruction.

<u>Allie's Shift in Language Content Integration in Practice (Q7 – Q 12) and (P4-P6)</u>

Table 4.4: Allie's Structured Pre and Post Interviews Self-Ratings

	Allie	
	Pre	Post
Q7	4	5
Q8	2.5	4
Q9	3	4
Q10	3.5	3
Q11	3	3.5
Q12	2	2

Allie Pre-Post Interview (Q7-Q12, Self-Rating)
Shift in Language and Content Integration in Practice
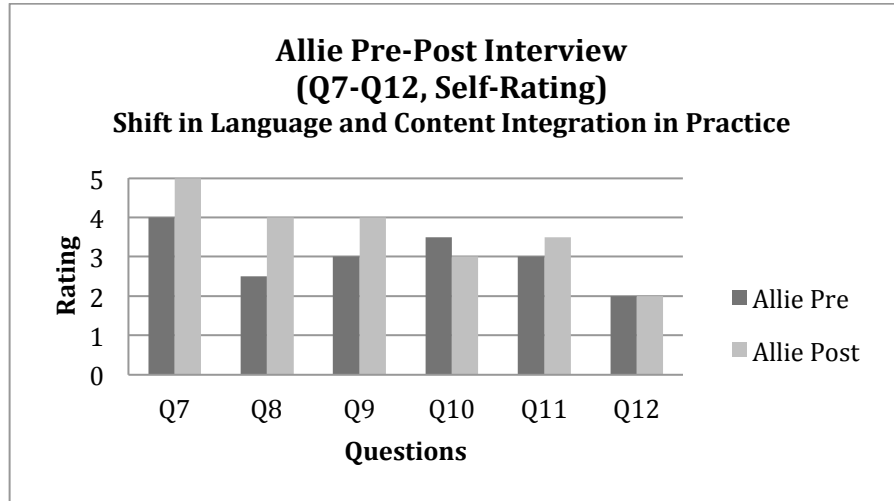
Table 4.5: Allie's Structured Pre and Post Interviews Researcher Rating

	Allie	
	Pre	Post
Q7	4	5
Q8	2	4
Q9	3	4
Q10	3	3
Q11	3	3
Q12	3	3

Researcher Pre-Post Interview Rating (Q7-Q12)
Shift in Langauge and Content Integration in Practice
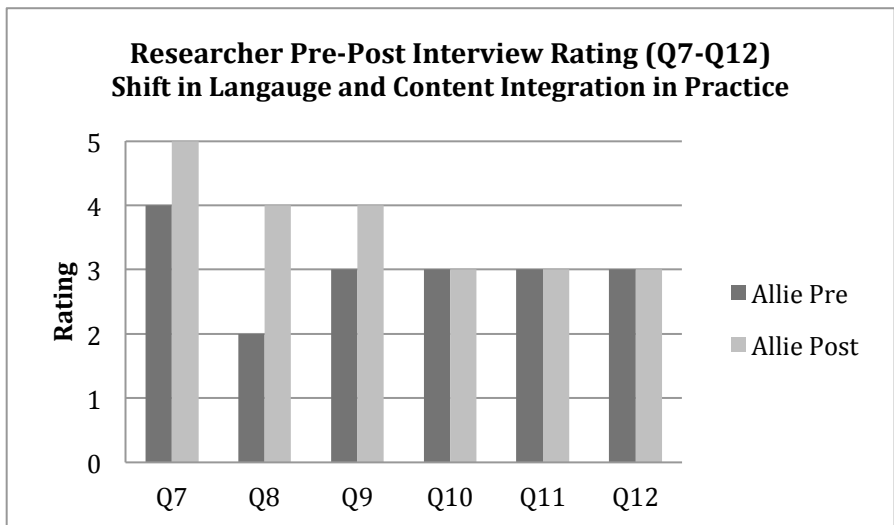
Table 4.6: Allie's Pre-Post Performance Task Researcher Ratings (P4-P6)

	Allie	
	Pre	Post
P4	3	4
P5	2	3
P6	2	3
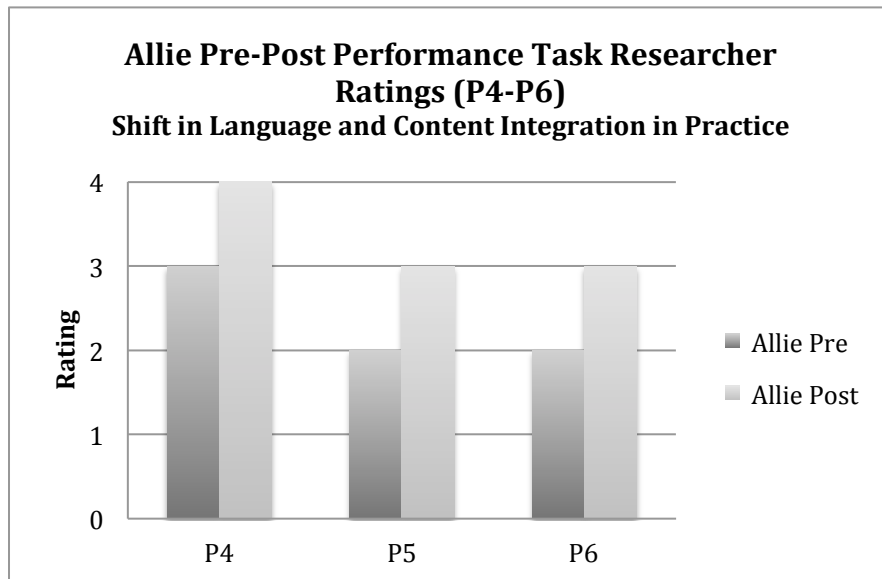
Allie Pre-Post Performance Task Researcher Ratings (P4-P6)
Shift in Language and Content Integration in Practice

Variance between Allie's Self-Rating and Researcher's Ratings regarding Shifts in Language and Content Integration in Practice

There was very little variance between how Allie rated herself and how I rated her responses surrounding questions on Shifts in Language and Content Integration in Practice. The only question where Allie rated herself higher by 1 point in both pre and post rating compared to my rating was around providing feedback to students regarding their language development. Her largest growth was in Q8, from a 2 to a 4 rating. For question 10, Allie rated herself lower in her post-interview than her initial interview; however, I rated her responses a 3 on both the pre- and the post-interview to this question, indicating no change. Interestingly, she showed no growth in questions 10, 11 and 12 based on my ratings, in comparison to her decreased, growth and no change ratings for the same questions, respectively. Her performance ratings all showed positive growth by 1 point in indicators 4, 5 and 6.

Allie's Shift in Language and Content Integration in Practice Discussion

Allie provided insights in the ways that she integrated language to teach her content during instruction. In describing how she tried to help newcomer students use language functions to make meaning in her content instruction during her post-interview, she referred back to her language goal, the specific academic vocabulary she wanted students to learn, and the explicitly taught language skills that students used to respond to the question. She recalled:

"I picked a few language functions [such as describing] that I thought would probably be helpful sort of foundational for the year. So in the beginning of the year and made sure that they all knew positive and negative [referring to connotation of words]… So then, when we moved to like objectified, humanize, and dehumanize sort of a scaffold to help them remember… and then I've got the smiley faces next to that right [her use of visuals

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to associate positive for smiley face and negative for sad face]… Like humanize is positive objectify is negative… dehumanize is negative.. so I mean that would be an example of just keeping some language functions that hold… that if I'm lucky in Spanish are cognates like positive and negative [referring to the cognates of the words humanize, objectify and dehumanize]… that can kind of be a bridge towards more academic vocabulary…"

She also added that she tried to make concrete the concept of language learning. She reflected that her concrete ways of doing language work in class as:

"I think that it helps them [students] access the English. Its like making it like a puzzle [that] they [have to] figure out because that's what learning a language really is… like let's take out all the [verb] –EDs… it's not just this mysterious thing that one day you [will] know… but it's really like lets break this into parts… "

However, she admitted that her experience in terms of how language was acquired or what works, in terms of effective language instruction, was limited. She described this limitation as:

"But I don't have a lot of formal training in like language acquisition…. but I'd like more help and just in terms of how language acquisition occurs it would be really useful to know because I'm trying to make them conjugate.. is.. are.. have.. and had… all the time but I don't know if that's actually what's gonna… if that's scientifically what shows that that's how they're going to learn it.. I don't know."

She found that this contributed to her questions and challenges around what she found effective language development instruction in her content. She described this struggle as:

"I think I wish I could know more about like the process of language acquisition and I think that there is a lot more to it than just posting a sentence frame up and having people use it for a week… and umm… I'm so really struggling with an idea that sort of that… we'll just post it [language objectives using sentence frames] and then it'll stick because they just don't! I'm still trying to figure out what makes things stick in terms of language. So besides repetition like that part that much… I know…"

She even recalled a specific experience as:

"I think my like second week teaching newcomers, I try to do this whole beautiful lesson where they [students] were looking at pictures and asking questions and it was a total bomb… and I went to Jade [her colleague] and she's like, 'yeah questions are like a really hard part of language!' And I was like, 'Oh right, I didn't think about that.' And so just like [thinking about] what's easy [for students]… what's hard [for students]… you know…

Allie also realized the balance of the tasks that she was asking students to perform and the language associated with that performance that she needed to teach students. She described this as:

"Because there are still times when I'm like, 'oh whoops… what I'm asking you to do is really tough language and then I didn't realize that…' I think I'm becoming more conscious of it and trying to set the situation up for it"

Allie explained how she explicitly connected the concept of civil disobedience and how she wanted students to talk about the concept, she recalled:

"For instance… I'm trying to teach like… I'm showing them the pictures are civil disobedience… and like you know they have to finish a sentence like " _____ disobeys by _____"… so they [students] have to say HOW [the subject disobeys]'… and then… "_____ is disobeyed because…. "

She saw where students would be confused with this type of task when using the provided sentence frames.

Based on my assessment of Allie's reflection of her own practice and her performance, my overall rating of Allie's Shift in Language and Content Integration in Practice was a 3. She showed growth in her ability to provide more clarity around how she explicitly integrated language development when she taught her content of Ethnic Studies. Allie repeated, "I do not know" in several parts of her interviews which revealed her still developing practice and knowledge base around promising practices in how to best support language acquisition and development through content. However, she demonstrated a degree of reflection that was often missing from other teachers: *"I think that there is a lot more to it than just posting a sentence frame up and having people use it for a week… we'll just post it [language objectives using sentence frames] and then it'll stick because they just don't! I'm still trying to figure out what makes things stick in terms of language."*

In evaluating both my ratings for the two dimensions of shift in language and content integration understanding and practice, my holistic rating for Allie's capacity to integrate language and content was a 3.5; her ability to integrate language and content in her instruction was somewhere between sufficient and above average.

Diagram 4.2: Holistic Rating of Allie
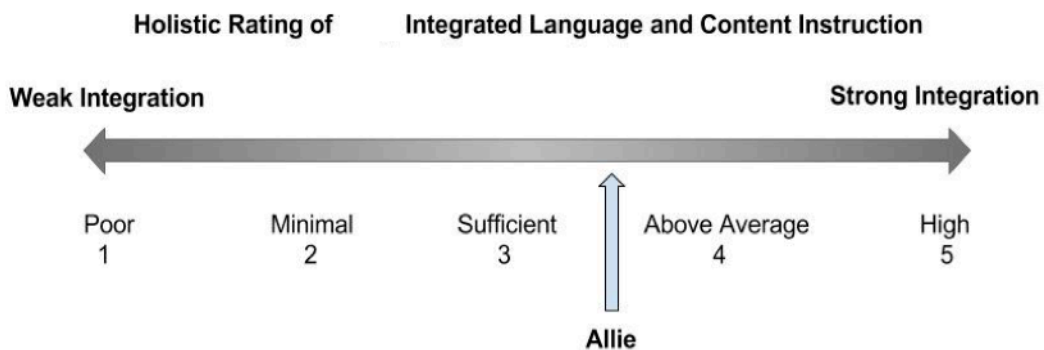
Table 4.7: Summary of Allie's Self-Rated Pre-and-Post Interviews and Researcher Interview and Performance Tasks Researcher Ratings and Overall Holistic Rating

Pre and Post Interviews Ratings			Allie Self-Ratings		Researcher Ratings			Pre and Post Performance Tasks Researcher Ratings		Allie	
			Pre	Post	Pre	Post		Indicators	#	Pre	Post
Shift in Language Content Integration Understanding **Overall Rating 4**	Incorporating newcomer students' prior knowledge and experiences into lesson planning	Q1	4.5	5	4	5		*ELD strategy competence* *Subject matter content competence*	P1	4	4
	Analyzing subject matter content standards to gain insight about the language demands for newcomer ELs	Q2	4	3.5	3	4					
	Identifying some unique features of language within content area	Q3	4	3	3	4		*Identifying language objectives in a lesson* *ELD strategy competence*	P2	2	3
	Determining supports for newcomer ELs in your content area?	Q4	5	5	3	5					
	Using supports for newcomer ELs in your content area?	Q5	5	5	4	5		*Subject matter content competence*	P3	2	3
	Providing opportunities for newcomer EL students with varied language proficiencies to engage in higher order thinking	Q6	3	4	2	3					
Shift in Language Content integration in practice **Overall Rating 3**	Implementing specific strategies to create a language-rich classroom	Q7	4	5	4	5		*Connecting student artifacts to teacher instruction*	P4	3	4
	Helping newcomer students become aware of language functions in the content discipline	Q8	2.5	4	2	4					
	Helping newcomer students use language functions to make meaning the content discipline	Q9	3	4	3	4		*Connecting teacher lesson implementation to subject matter content instruction through the ELD strategy of student-student interaction*	P5	2	3
	Balancing instruction to ensure newcomer students practice language use in various contexts and experiences	Q10	3.5	3	3	3					
	Communicating language expectations to newcomer students	Q11	3	3.5	3	3		*Connecting teacher and students actions to lesson outcomes.*	P6	2	3
	Providing newcomer students with feedback on their language development	Q12	2	2	3	3					

Ellen's Shift in Language Content Integration Understanding (Q1 – Q6, Q13 and P1-P3)

Table 4.8: Ellen's Pre- and Post-Interviews Self-Ratings

	Ellen	
	Pre	Post
Q1	4	4.5
Q2	3	4
Q3	4	3
Q4	4	5
Q5	4	5
Q6	3	3

Ellen Pre-Post Interview (Self-Rating)
Shift in Langauge and Content Integration Understanding
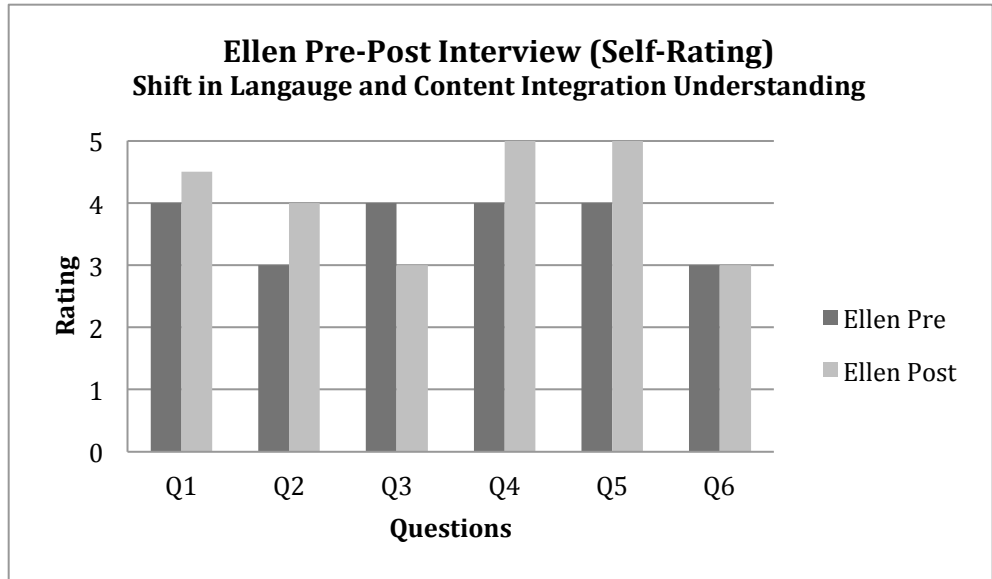
Table 4.9: Ellen's Pre-and Post-Interviews Researcher Ratings

	Ellen	
	Pre	Post
Q1	2	2
Q2	3	3
Q3	2	2
Q4	3	3
Q5	3	3
Q6	3	2
Q13	2	3

Researcher Pre-Post Interview Rating
Shift in Langauge and Conent Integration Understanding
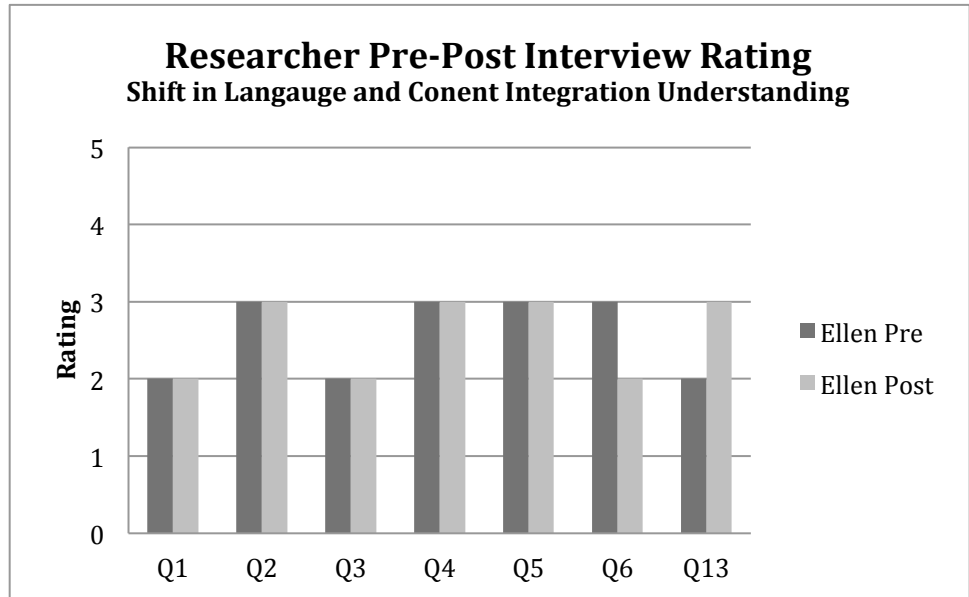
Table 4.10: Ellen's Pre-Post Performance Task Researcher Ratings (P1-P3)

	Ellen	
	Pre	Post
P1	2	3
P2	4	4
P3	2	3
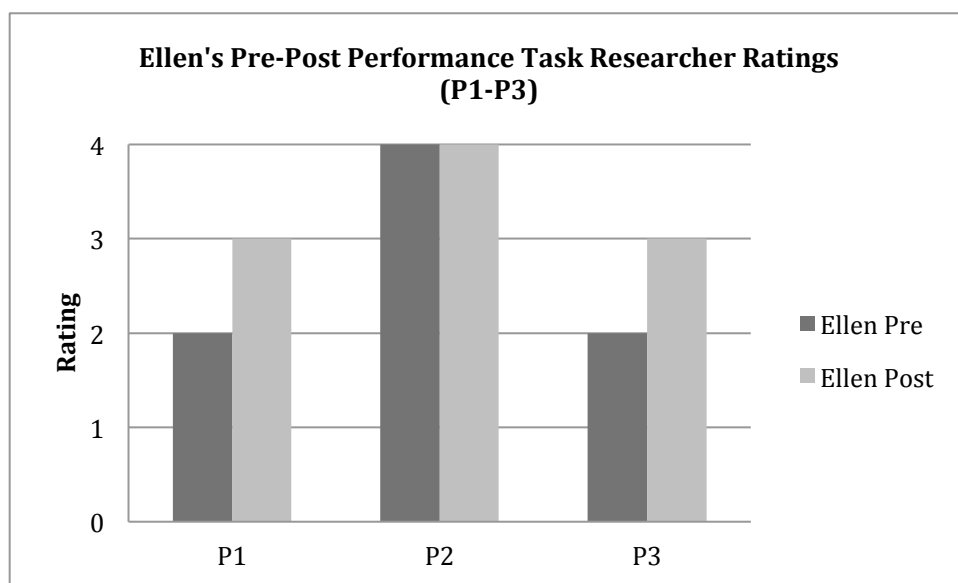
Ellen's Pre-Post Performance Task Researcher Ratings (P1-P3)

Variance between Ellen's Self-Rating and Researcher's Ratings regarding Shifts in Language and Content Integration Understanding

Ellen self-rated growth in three questions, a decrease for one question and no change in one question under shift in language and content understanding. However, my ratings for Ellen's pre and post interview responses showed only one growth for one question, showed no growth across five questions, and a decrease for one question. Additionally, Ellen rated herself, on average, 2 points higher than how I rated her interview responses. Her performance tasks showed gains for both identifying ELD strategies and language objectives in a lesson while her subject matter competence showed no change.

Ellen's Shift in Language and Content Integration Understanding Discussion

Evidence of Ellen's growth was displayed in her ability to explain language and content integration. When asked to define language and content integration in her pre-interview, she described it as:

"I think because math I feel like can be its own language. I think sometimes I intentionally try to separate them (language and content) rather than integrate them (language and content) in the idea that like content is like what math do I solve today and then language is like how am I going to talk about the math that I'm solving today. I think that's how they're connected, but I think that there are so like such varying, such different skills [of students] that they almost have to be separated in a math class… I get the idea of putting it together and like one has to support the other and vice versa but sometimes I think I just struggle with that…"

Ellen's description of content as the "what" math to solve and language as the "how" to talk about the math showed her general view of each concept, but Ellen seemed confused with the concept of integrating the two concepts since she viewed mathematics as "its own language" and that she attributed the challenge of integration of language and content to the varied student skills in her class, thus she *"intentionally separate(s) language and content."*

However, in her post interview, Ellen developed a more relational understanding between the idea of integrating language and content. She explained it as:

> *"When I think about language and content I think about how do we lessen the language burden for the content. So like what strategy whether it's preloading vocabulary… whether it's you know teaching vocabulary separate, or whether it's splitting things up into multiple days and that they're only learning one word today… I think about how can we make that content accessible if the content is written in English…. I think about like how can I preload all of that (academic vocabulary) to make it accessible when they are trying to dissect something and figure out what information is important. So I help them think about what they're looking for and what kinds of words… I'm thinking like slope we used "per" a lot, "each" or "every" just knowing those three words which you like kind of don't think as math words but they're actually really important if you want to try and do any word problem regarding linear equations… But I think yeah just like more about like do you know the language you need to access the content."*

Her perception of language had shifted, and she recognized language as the entry point to access the content and she referred to the various academic vocabulary, both Tier III—content specific and Tier II—common words across content, and to explicitly teach these words as a way to integrate language and content.

I rated Ellen's Overall Shift in Language and Content Integration Understanding a 3. She displayed growth in her ability to articulate a more developed understanding of language and content integration and even provided examples of her attempts to do so in her instruction. This was growth from her initial stance where she saw language and content as two entities that should be intentionally separated.

Ellen's Shift in Language Content Integration in Practice (Q7 – Q 12 and P4-P6)

Table 4.11: Ellen's Structured Pre and Post Interviews Self-Ratings

	Ellen	
	Pre	Post
Q7	2	3
Q8	1	1
Q9	1	2
Q10	2	2
Q11	1	4
Q12	2	4

Ellen Pre-Post Interview (Self-Rating)
Shift in Langauge and Content Integration in Practice
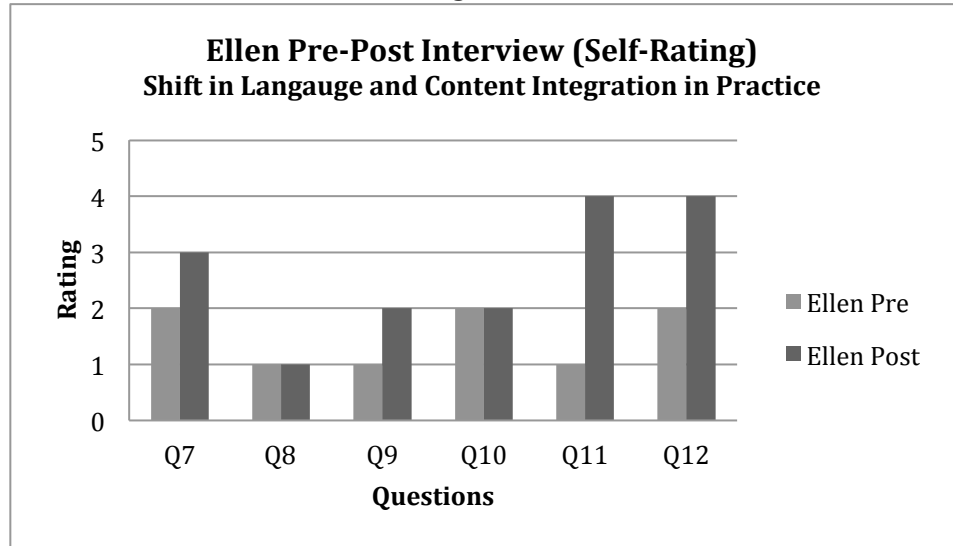
Table 4.12: Ellen's Structured Pre and Post Interviews Researcher Ratings

	Ellen	
	Pre	Post
Q7	2	3
Q8	1	2
Q9	2	3
Q10	1	1
Q11	1	2
Q12	1	2

Researcher Pre-Post Interview Rating
Shift in Language and Content Integration in Practice
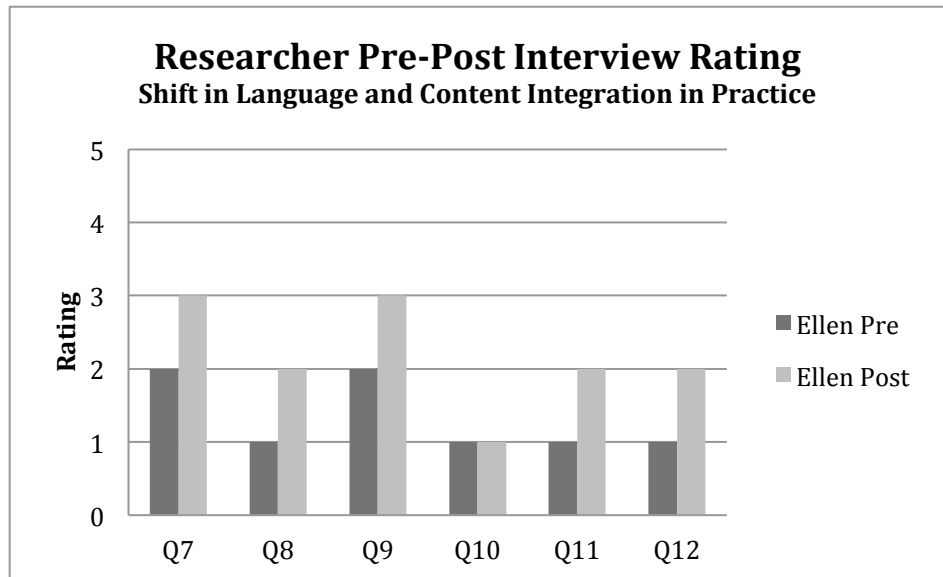
Table 4.13: Ellen's Pre-Post Performance Task Researcher Ratings (P4-P6)

	Ellen	
	Pre	Post
P4	3	4
P5	2	3
P6	2	3
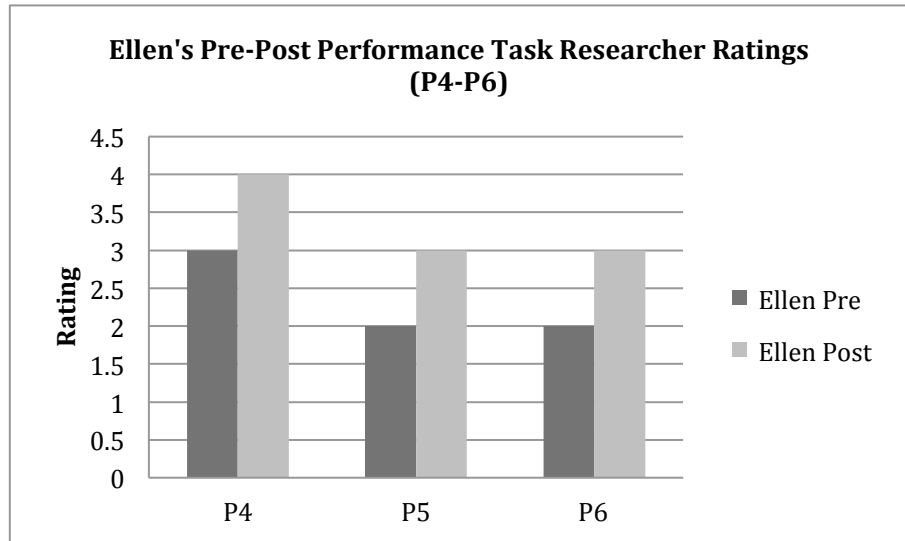
Ellen's Pre-Post Performance Task Researcher Ratings (P4-P6)

Variance between Ellen's Self-Rating and Researcher's Ratings regarding Shifts in Language and Content Integration in Practice

For both Ellen's pre-interview self-report and my rating of Ellen's pre-interview, there was much consistency. On average, both of our ratings for her pre-intervention in language and content integration in practice were a 1. For her post interview, Ellen rated herself 2 points higher on questions 11 and 12 in her post-interview from her pre-interview regarding communicating language expectations and feedback to students' language development. However, our overall ratings were fairly consistent, with some growth on certain questions while no growth in others. Her performance task ratings all showed a positive growth of at most 1 point.

Ellen's Shift in Language and Content Integration in Practice Discussion

A noteworthy idea that surfaced from Ellen's pre and post interview was her understanding of modulating language and content (Gersten & Baker, 1999) as a language development strategy to teach the content. In her pre-interview, she mentioned:

> *"The research on reducing the cognitive burden… If you're doing content make sure that content is what you're focused on and not language. If you're doing language make sure they have the content to support like they know how to do the content so all they focus on is how am I talking about the content like, have the language to ask questions about the content and then if you struggle in the content go ahead and struggle but separating those into two different days which is why I feel like we are in such a slow pace."*

She alluded back to this idea in her post-interview as:

"Trying to streamline that process… the language and the content… if I don't want them to worry about the process like I'll just explain [translate] the entire process in Spanish and then the language in the content they'll struggle with. So if I want them to do something specific with language, I'll explain what I want them to do in Spanish and then make them do it in English."

Ellen's reliance on modulating language and content, as a strategy for language development, stemmed from her concern for students' comprehension of the math content. She leveraged her ability to speak Spanish as a way to support this, since most of her students were primarily Spanish speakers. Additionally, contributing to this reliance on translating for students was Ellen's perception of herself as someone who *"definitely put a huge emphasis on content."* She surfaced a struggle of hers around the question:

"Am I a math teacher or am I a language teacher? The reality is both, but when it feels too hard to do both, I'm always going to lean towards being a math teacher over language teacher just because that's my content area… that's also my background like I have a degree in math and so its what I like better."

As the literature suggested around teachers' predilection towards privileging content over language (Fillmore & Snow, 2000), Ellen's pedagogy leaned heavily on content-driven approach (Met, 1999; Banegas, 2012), despite her more developed understanding of language and content integration based on her growth from her pre-interview to her post interview. This was even reflected in her pre-interview response around feedback to students:

"Yeah I do a lot… I think I give more in their L1 than in English… I'll say something [in Spanish] like, 'you're close like I want you to keep going or continue… I see something small that you could change or like maybe look at this again…' It's kind of like it's more content feedback I would say than language feedback…"

On the other hand, her post-interview revealed her growth in language and content integration in practice around feedback. Her post-interview response around communicating language expectations to newcomer students was:

"Communicating language expectations is just kind of the language goal we do one every day whether it's followed or not. In terms of actual language production, when we have activities like that it's through the instructions that I do that… like, 'I want you to say this sentence' or 'I want you to like pick from these three words' … and I think that message gets across pretty clearly enough and often I'll explain..."

Based on my assessment of Ellen's pre-interview and post-interview responses around her language and content integration practice, my overall rating for Ellen's Shift in Language and Content Integration in Practice was a 2. She showed growth in her articulation of the types of language she expected students to produce in class. Ellen sometimes expressed contradictory statements around providing instruction only for content acquisition when in actuality, she was also providing language development instruction to students, albeit not to the same caliber as content instruction.

Table 4.14: Summary of Ellen's Self-Rated Pre-and-Post Interviews and Researcher Interview and Performance Tasks Researcher Ratings and Overall Holistic Rating

Pre and Post Interviews Ratings			Ellen Self-Ratings		Researcher Ratings		Pre and Post Performance Tasks Researcher Ratings		Ellen	
			Pre	Post	Pre	Post	Indicators	#	Pre	Post
Shift in Language Content Integration Understanding **Overall Rating 3**	Incorporating newcomer students' prior knowledge and experiences into lesson planning	Q1	4	4.5	2	2	*ELD strategy competence Subject matter content competence*	P1	2	3
	Analyzing subject matter content standards to gain insight about the language demands for newcomer ELs	Q2	3	4	3	3				
	Identifying some unique features of language within content area	Q3	4	3	2	2	*Identifying language objectives in a lesson ELD strategy competence*	P2	4	4
	Determining supports for newcomer ELs in your content area?	Q4	4	5	3	3				
	Using supports for newcomer ELs in your content area?	Q5	4	5	3	3	*Subject matter content competence*	P3	2	3
	Providing opportunities for newcomer EL students with varied language proficiencies to engage in higher order thinking	Q6	3	3	3	2				
Shift in Language Content integration in practice **Overall Rating 2**	Implementing specific strategies to create a language-rich classroom	Q7	2	3	2	3	*Connecting student artifacts to teacher instruction*	P4	3	4
	Helping newcomer students become aware of language functions in the content discipline	Q8	1	1	1	2				
	Helping newcomer students use language functions to make meaning the content discipline	Q9	1	2	2	3	*Connecting teacher lesson implementation to subject matter content instruction through the ELD strategy of student-student interaction*	P5	2	3
	Balancing instruction to ensure newcomer students practice language use in various contexts and experiences	Q10	2	2	1	1				
	Communicating language expectations to newcomer students	Q11	1	4	1	2	*Connecting teacher and students actions to lesson outcomes.*	P6	3	3
	Providing newcomer students with feedback on their language development	Q12	2	4	1	2				

In evaluating both my ratings for the two dimensions of shift in language and content integration understanding and practice, my holistic rating for Ellen's capacity to integrate language and content was a 2.5; her ability to integrate language and content in her instruction was moving from minimal towards sufficient.

Diagram 4.3: Holistic Rating of Ellen
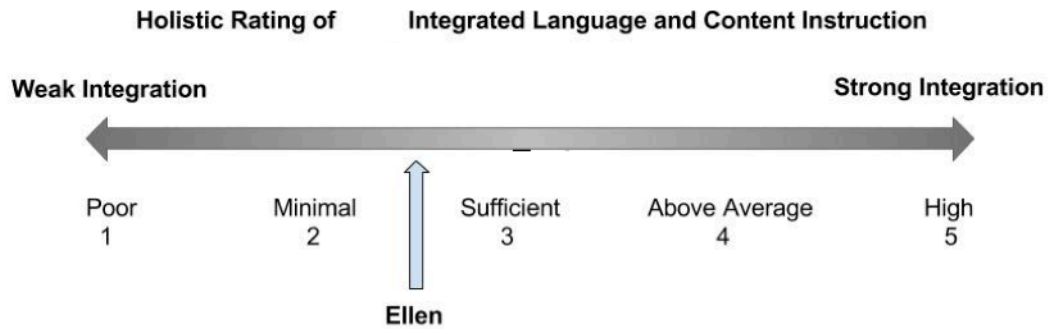
JADE'S IMPACT DIFFERENCE (BASELINE AND OUTCOME DATA)

Jade's Shift in Language Content Integration Understanding (Q1 – Q6, Q13 and P1-P3)

Table 4.15: Jade's Pre- and Post-Interviews Self-Ratings

	Jade	
	Pre	Post
Q1	4	4
Q2	3	3
Q3	4	5
Q4	3	4
Q5	4	5
Q6	3	4
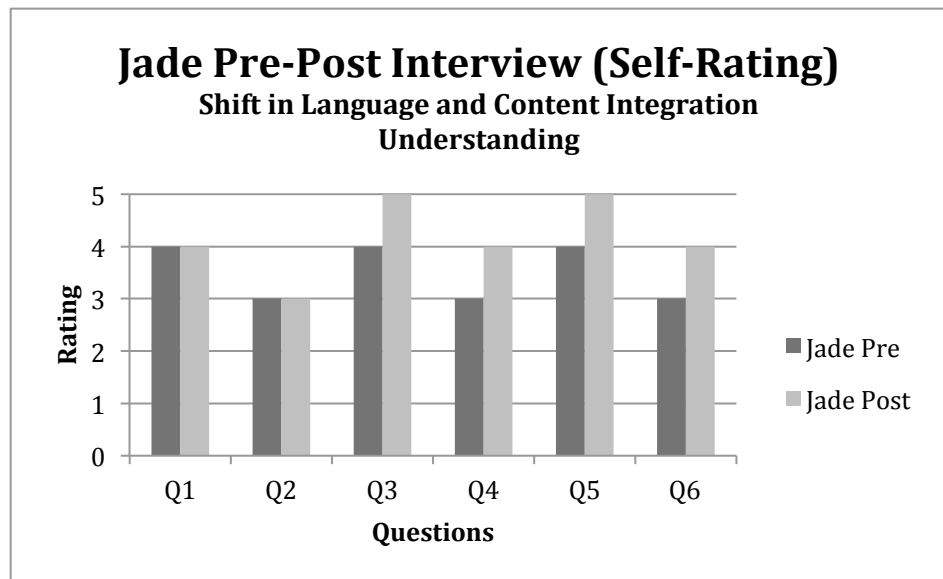
Table 4.16: Jade's Pre-and Post-Interviews Researcher Ratings

	Jade	
	Pre	Post
Q1	2	3
Q2	2	3
Q3	1	3
Q4	3	4
Q5	3	4
Q6	3	3
Q13	2	4

Researcher Pre-Post Interview Rating
Shift in Language nd Content Integration Understanding

Rating (Q1–Q13): Jade Pre, Jade Post
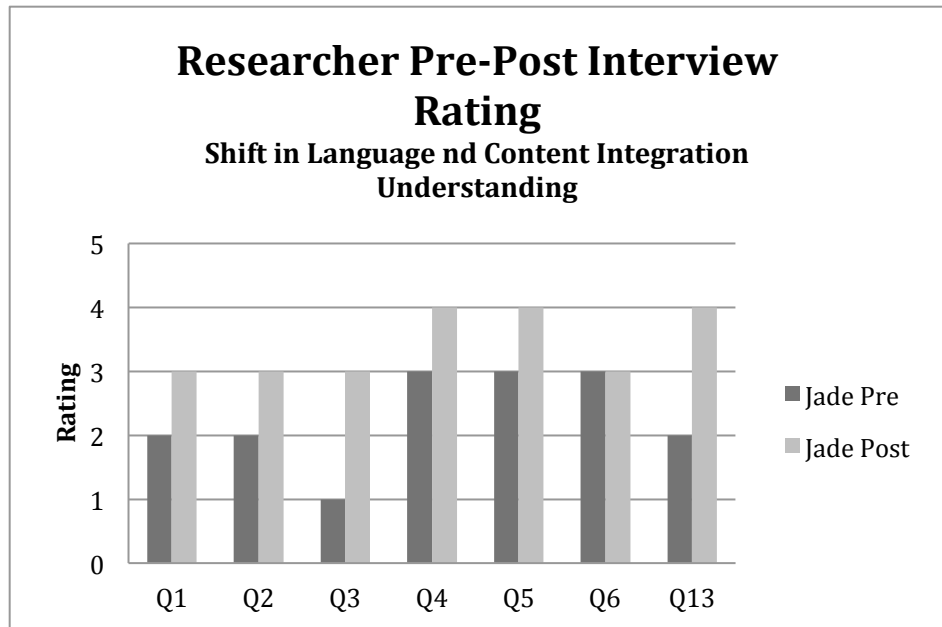
Table 4.17: Jade's Pre-Post Performance Task Researcher Ratings (P1-P3)

	Jade	
	Pre	Post
P1	3	3
P2	2	2
P3	2	3
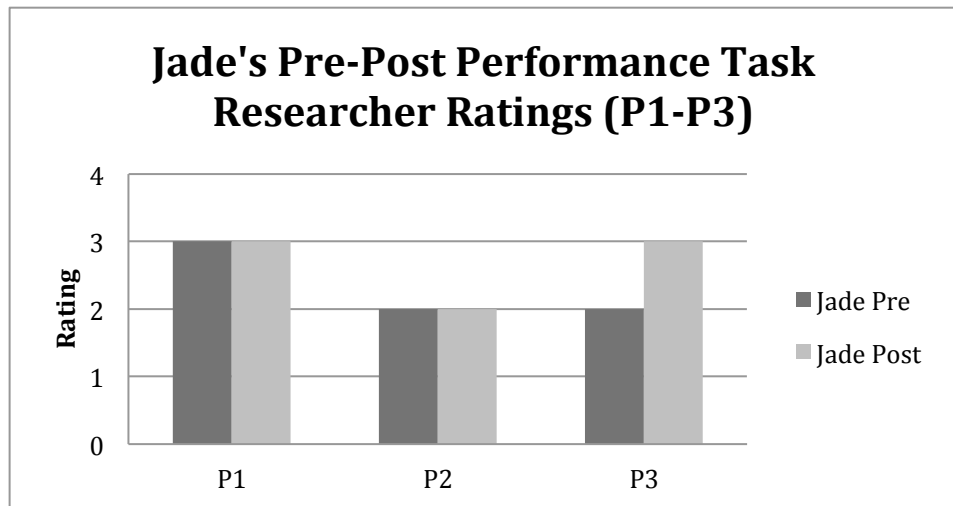
Jade's Pre-Post Performance Task Researcher Ratings (P1-P3)

Rating (P1–P3): Jade Pre, Jade Post

Variance between Jade's Self-Rating and Researcher's Ratings regarding Shifts in Language and Content Integration Understanding

Jade's self-ratings indicated four questions that showed growth, particularly Q3, Q4, Q5, and Q6. My ratings however showed that she demonstrated growth in five questions and showed no growth in two questions, specifically Q6 and Q13. Jade's ratings were also on average, one point higher compared to my ratings across all Q1-Q6. Interestingly, she rated herself a 4 and then a 5 in her pre-interview and post-interview, respectively, on Q3. However, I found her responses to Q3 around unique features of language in her content area to be only at a 1 and a 3

for the pre-intervention and post-intervention, respectively. Additionally, she displayed no growth in two areas of her performance task and showed growth in one area of her performance task, specifically around the identification of a language objective. Nonetheless, there was agreement in her growth in certain areas of her language and content integration understanding.

Jade's Shift in Language and Content Integration Understanding Discussion

Jade stated two interesting things during her pre-interview that caught my attention. First, she mentioned her openness to trying new strategies to incorporate in her classes as:

"Once I see how strategies [are] used then usually I have a clear understanding [if] its powerful in some way… so like once once you have an example of it and you can actually see it then there's no harm in trying to make it happen."

However, she revealed that she was challenged by the idea of what constituted as content or language development in teaching her English class. She stated this as:

"Sometimes I feel like I get confused between language and content with English because a lot of times the focus might be just adjectives and I'm like is that language or is that content or its both?"

She then alluded to this challenge again in her post-interview stating that:

"It's more just like a lot of skill based learning and a lot of language work so I feel like if anything I need to work on content stuff and I think… I can see that it's more of a struggle with the other contents about how to implement the language piece in it…"

Her openness to try things in her class that she found useful and that could potentially be effective in her instruction was something that stood out about her admission on the first statement. This was reflected in her non-resistant disposition to constantly wanting to improve her own practice. She then raised the contention between what was language development and content in an English class, citing the content could be literature focused or more language focused. She then revisited this in her post-interview where she leaned more towards "skill based learning" and "language work" which translated to grammar/vocabulary focus work. She admitted, in her words, *"I need to work on content stuff,"* which she associated with literature study such as literary analysis.

In her pre-interview, she defined language and content integration as:

"For me really just adding in particular vocab words or particular expressions or frames to… that relates to… not necessarily relates to the content.. but that I can integrate or implement within the content so certain kind of way that students can communicate with each other in all their classes like clarifying questions… agreeing/disagreeing that can kind of stuff…"

For her post-interview however, she described language and content integration as:

"So basically I'm incorporating these reading skills and I'm giving them sentence frames… I'm giving them language to try to talk about the story… So that's some

language with the content. When we did our writing… our essay you know… the content was about the American Dream…[whether it's a] myth or reality… We did lots of work with using [and] finding the evidence and then we did lots of structured writing about this topic and sort of comparing contrasting… and analyzing the material with the language structures that are provided."

The positive shift in her description of what qualified as language and content integration was evident in how she described language development in her pre-interview as *"vocab words or particular expressions or frames"* that did "*not necessarily relate to the content*" in order for students to communicate with each other. In comparison, she described language and content integration during her post-interview as giving students the language *"to try to talk about the story [content]"* by "*using reading skills and provision of sentence frames*" and "*the application and analysis of evidence in structured writing with provided language structures.*" The change in specificity in her definition, which included the modality that students used to produce the language, showed growth in her understanding of language and content integration.

That said, I rated Jade's Overall Shift in Language and Content Integration Understanding at a 4. She displayed growth in providing clarity around her understanding of how she thought about the use of language to discuss the content being taught in her class. Moreover, she expanded her conception of English content from grammar and language topics to reading literature that asked students to analyze and compare/contrast using provided language structures and sentence frames.

Jade's Shift in Language Content Integration in Practice (Q7 – Q 12 and P4-P6)

Table 4.18: Jade's Structured Pre and Post Interviews Self-Ratings

	Jade	
	Pre	Post
Q7	5	5
Q8	4	4
Q9	3	3
Q10	3	4
Q11	4	4
Q12	2	3

Jade Pre-Post Interview (Self Rating) Shift in Language and Content Integration in Practice
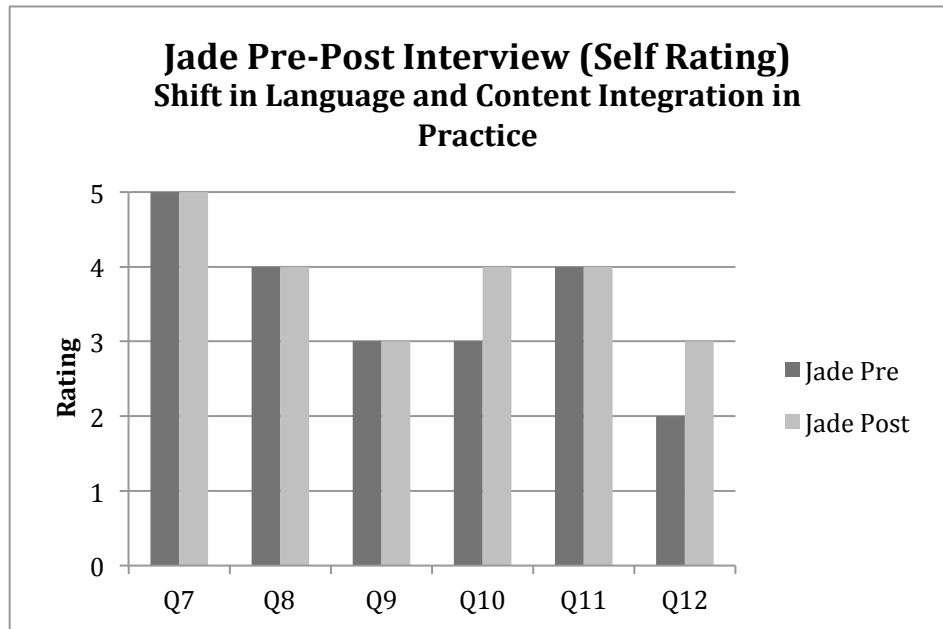
Table 4.19: Jade's Structured Pre and Post Interviews Researcher Ratings

	Jade	
	Pre	Post
Q7	4	4
Q8	3	4
Q9	3	4
Q10	3	3
Q11	4	4
Q12	2	3

Researcher Pre-Post Interview Rating
Shift in Language and Content Integration in Practice
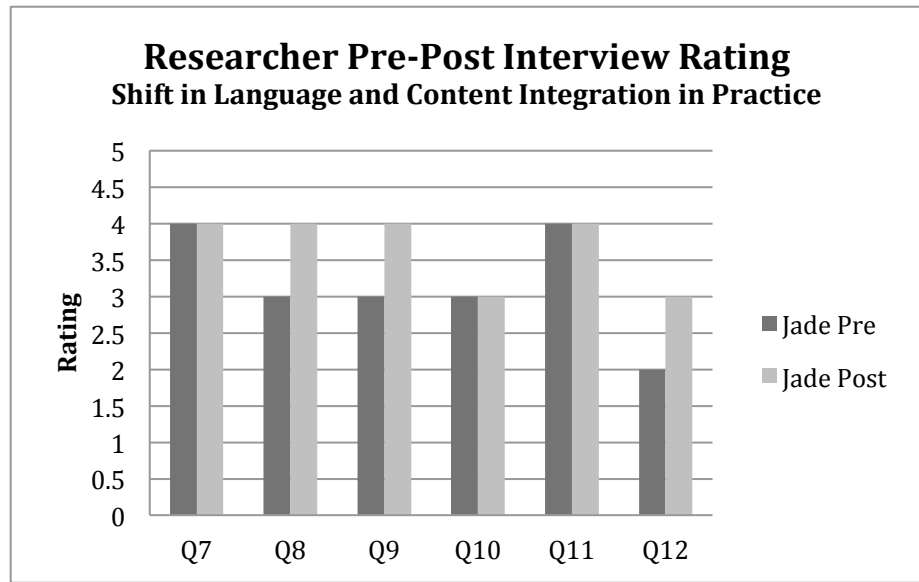
Table 4.20: Jade's Pre-Post Performance Task Researcher Ratings (P4-P6)

	Jade	
	Pre	Post
P4	3	3
P5	4	4
P6	3	3
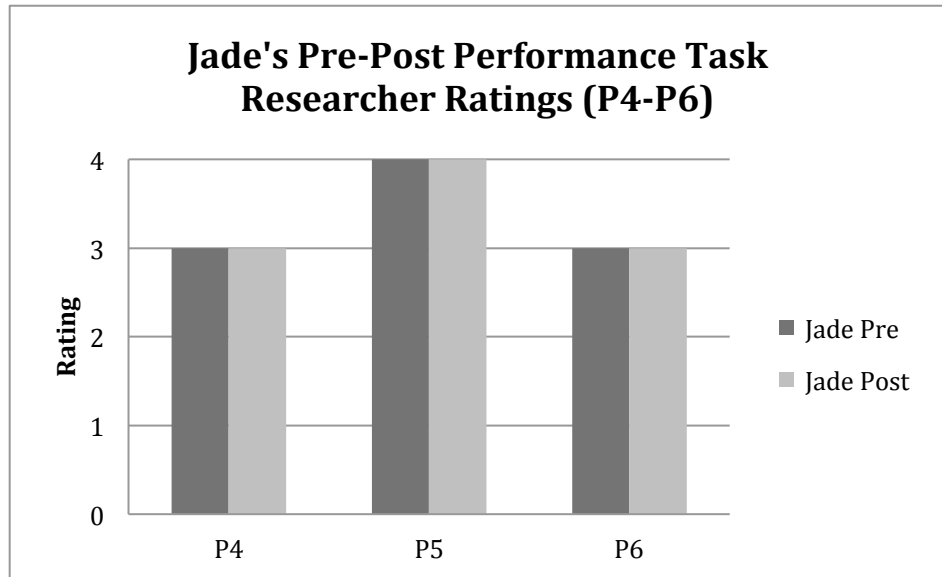
Jade's Pre-Post Performance Task Researcher Ratings (P4-P6)

Variance between Jade's Self-Rating and Researcher's Ratings regarding Shifts in Language and Content Integration in Practice

Jade rated herself higher for Q7 compared to my rating of her response by 1 point; nevertheless our ratings both showed no change between her pre and post interview responses. Jade showed no change in her rating for Q8, Q9 and Q11, but I found her responses to Q8 and Q9 displaying a positive growth and showed agreement with her rating for Q11 and Q12. She rated a positive growth for Q10, but I rated her as having no change. There was a fairly consistent agreement between Jade's self-rating and my ratings of her interview responses. For

her performance tasks, she showed no change between pre-and post tasks, specifically P4, P5 and P6.

<u>Jade's Shift in Language and Content Integration in Practice Discussion</u>

Jade addressed the issue of "transfer" in both her pre-and post-interviews. In her pre-interview, she explained it as:

> *"I'm thinking more transfer… Are they like using them outside of class? Are they using it with other students in other classes? or They're just having*
> *a conversation with the teacher? or something like that… I'm not so sure*
> *that it's traveling outside of the class."*

Whereas, during her post-interview, she alluded to this as:

> *"There's not much transfer especially for the students that speak Spanish… like so much of the structure is very similar… there's cognates and it's like trying to figure out ways to get them to think more about making those connections.*

Jade was challenged to think about how students made meaning in her class using language functions and she associated this with students' ability to transfer the skills and learning in her class to other contexts. Her pre-interview response showed her uncertainty if transfer was happening, whereas she made a more definitive statement about students' issues with transference in language skills and learning, especially for Spanish speaking students during her post-interview response.

Additionally, Jade spoke about the ways she promoted language development in her class, showing a positive shift. In her pre-interview, she talked about how:

> *"Reporting out is something we do often... I feel like that you need to use a lot you know if you are having a conversation with someone and then you're*
> *sharing with someone else what the conversation was… definitely do pair share...*
> *I always have them say my partner ____ told me… said this…*
> *or my partner's idea was… and then if they're doing some kind of like project or assignment… I usually have them say…'our group concluded that…' or 'We've discovered that...' around those frames… those language functions."*

However, her post-interview revealed a more explicit language development skill building with gradual release of supports. She explained this as:

> *"One thing that I mean I'm always looking for is that they [students] know how to answer from the question… so I haven't been putting sentence frames this semester… very much last semester I was doing it almost every question and then sometimes in the beginning of class... Every time we did the DO NOW, I would show them that the words [to use to answer the question] were coming from the questions…"*

As evidence of growth in her language development teaching, Jade shifted from providing explicit sentence frames for students to use in order to report out what they learned to the rest of class to the more explicit skill of answering questions by directly using words from the question without the use of sentence frames. This move to suspend the use of sentence frame as scaffolds

for students in order to build students' capacity to independently identify responses to questions using key words within the question was a more sophisticated approach to language development.

I rated Jade's Overall Shift in Language and Content Integration at a 4. As a sign of growth in diagnosing students' language development challenges, Jade raised the issue of "transference" of skills and learning by students as something that specific students struggled with in her class. Additionally, her shift from the use of sentence frames as part of reporting out structures in her class to a less scaffolded approach of explicitly teaching students to respond to questions using key words in the question was a more sophisticated method of teaching language development.

In evaluating the dimensions of shift in language and content integration understanding and practice for Jade, my holistic rating for Jade's capacity to integrate language and content was a 4; her ability to integrate language and content in her instruction was above average.

Diagram 4.4: Holistic Rating of Jade

Holistic Rating of **Integrated Language and Content Instruction**

Weak Integration **Strong Integration**

Poor	Minimal	Sufficient	Above Average	High
1	2	3	4	5
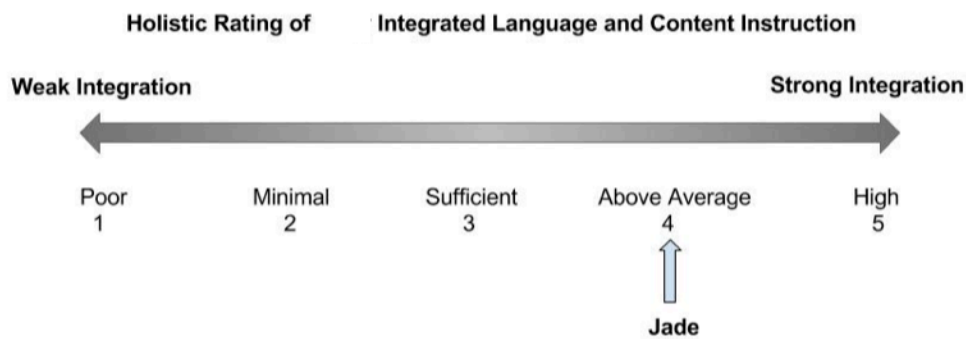
Jade

Table 4.21: Summary of Jade's Self-Rated Pre-and-Post Interviews and Researcher Interview and Performance Tasks Researcher Ratings and Overall Holistic Rating

Pre and Post Interviews Ratings			Jade Self-Ratings		Researcher Ratings		Pre and Post Performance Tasks Researcher Ratings		Jade	
			Pre	Post	Pre	Post	Indicators	#	Pre	Post
Shift in Language Content Integration Understanding **Overall Rating 4**	Incorporating newcomer students' prior knowledge and experiences into lesson planning	Q1	4	4	2	3	*ELD strategy competence Subject matter content competence*	P1	3	3
	Analyzing subject matter content standards to gain insight about the language demands for newcomer ELs	Q2	3	3	2	3				
	Identifying some unique features of language within content area	Q3	4	5	1	3	*Identifying language objectives in a lesson ELD strategy competence*	P2	2	2
	Determining supports for newcomer ELs in your content area?	Q4	3	4	3	4				
	Using supports for newcomer ELs in your content area?	Q5	4	5	3	4	*Subject matter content competence*	P3	2	3
	Providing opportunities for newcomer EL students with varied language proficiencies to engage in higher order thinking	Q6	3	4	3	3				
Shift in Language Content integration in practice **Overall Rating 4**	Implementing specific strategies to create a language-rich classroom	Q7	5	5	4	4	*Connecting student artifacts to teacher instruction*	P4	3	3
	Helping newcomer students become aware of language functions in the content discipline	Q8	4	4	3	4				
	Helping newcomer students use language functions to make meaning the content discipline	Q9	3	3	3	3	*Connecting teacher lesson implementation to subject matter content instruction through the ELD strategy of student-student interaction*	P5	4	4
	Balancing instruction to ensure newcomer students practice language use in various contexts and experiences	Q10	3	4	3	3				
	Communicating language expectations to newcomer students	Q11	4	4	4	4	*Connecting teacher and students actions to lesson outcomes.*	P6	3	3
	Providing newcomer students with feedback on their language development	Q12	2	3	2	3				

IMPACT DATA SUMMARY

The following table (Table 4.9) summarized the impact data collected from the baseline (pre) and outcome (post) interviews, for both the participant and the researcher. The participant self-ratings and researcher ratings were provided along with the impact difference between the pre and post ratings. From the data, we noticed that there were twenty positive differences from the self-ratings compared to twenty-two positive differences from researcher ratings. There were twelve no growth self-ratings compared to thirteen no growth researcher ratings. Finally, there were four regressed self-ratings compared to one regressed researcher rating.

Table 4.22: Interview Summary (Baseline, Outcome and Impact Difference)

Dimensions	Qs	Teacher	Participant Self-Ratings			Researcher Ratings		
			Baseline (Pre)	Outcome (Post)	Impact Difference	Baseline (Pre)	Outcome (Post)	Impact Difference
Shift in Language and Content Integration Understanding	Q1	Allie	4.5	5	+0.5	4	5	+1
		Ellen	4	4.5	+0.5	2	2	0
		Jade	4	4	0	2	3	+1
	Q2	Allie	4	3.5	-0.5	3	4	+1
		Ellen	3	4	+1	3	3	0
		Jade	3	3	0	2	3	+1
	Q3	Allie	4	3	-1	3	4	+1
		Ellen	4	3	-1	2	2	0
		Jade	4	5	+1	1	3	+2
	Q4	Allie	5	5	0	3	5	+2
		Ellen	4	5	+1	3	3	0
		Jade	3	4	+1	3	4	+1
	Q5	Allie	5	5	0	4	5	+1
		Ellen	4	5	+1	3	3	0
		Jade	4	5	+1	3	4	+1
	Q6	Allie	3	4	+1	2	4	+2
		Ellen	3	3	0	3	2	-1
		Jade	3	4	+1	3	3	0
Shift in Language and Content Integration in Practice	Q7	Allie	4	5	+1	4	5	+1
		Ellen	2	3	+1	2	3	+1
		Jade	5	5	0	4	4	0
	Q8	Allie	2.5	4	+1.5	2	4	**+2**
		Ellen	1	1	0	1	2	**+1**
		Jade	4	4	0	3	4	**+1**
	Q9	Allie	3	4	+1	3	4	+1
		Ellen	1	2	+1	2	3	+1
		Jade	3	3	0	3	3	0
	Q10	Allie	3.5	3	-0.5	3	3	0
		Ellen	2	2	0	1	1	0
		Jade	3	4	+1	1	3	+2

	Q11	Allie	3	3.5	+0.5	3	3	0
		Ellen	1	4	**+3**	1	2	+1
		Jade	4	4	0	4	4	0
	Q12	Allie	2	2	0	3	3	0
		Ellen	2	4	**+2**	1	2	+1
		Jade	2	3	+1	2	3	+1

The next table (Table 4.10) reflected the summary of the impact data collected from the performance tasks rated by the researcher. My performance task ratings were provided along with the impact difference between the pre and post ratings. From the data, we found ten positive impact differences, eight displaying no growth, and zero decreased from pre to post ratings.

Table 4.23: Performance Task Summary (Baseline, Outcome and Impact Difference)

Dimensions	Indicators	Ps	Teacher	Baseline (Pre)	Outcome (Post)	Impact Difference
Shift in Language and Content Integration Understanding	*ELD strategy competence*	P1	Allie	4	4	0
			Ellen	2	3	+1
			Jade	3	3	0
	Subject matter content competence	P2	Allie	2	3	+1
			Ellen	4	4	0
			Jade	2	2	0
	Identifying language objectives in a lesson	P3	Allie	2	3	**+1**
			Ellen	2	3	**+1**
			Jade	2	3	**+1**
Shift in Language and Content Integration in Practice	*Connecting student artifacts to teacher instruction*	P4	Allie	3	4	+1
			Ellen	3	4	+1
			Jade	3	3	0
	Connecting teacher lesson implementation to subject matter content instruction through the ELD strategy	P5	Allie	2	3	+1
			Ellen	2	3	+1
			Jade	4	4	0
	Connecting teacher and students actions to lesson outcomes.	P6	Allie	2	3	+1
			Ellen	3	3	0
			Jade	3	3	0

Diagram 4.5: Holistic Rating Summary

Holistic Rating of Truly Integrated Language and Content Instruction

Weak Integration   Strong Integration

| Poor | Minimal | Sufficient | Above Average | High |
| 1 | 2 | 3 | 4 | 5 |

Ellen   Allie   Jade
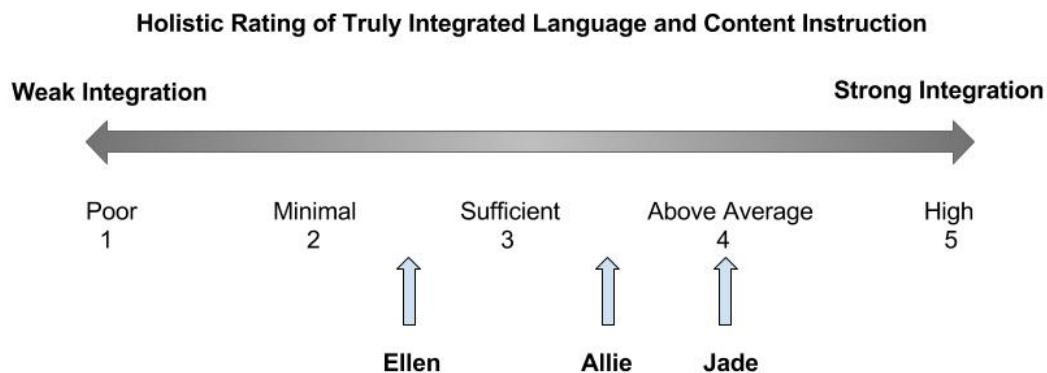
The impact data results revealed promising efficacy of this design study, particularly around developing teachers' capacity to identify language objectives in a lesson as evidenced by impact differences in Q8 and P3 where all three participants showed positive impact differences. Positive impact differences in P4, indicating an increase in teachers' ability to connect student artifacts to teacher instruction, could be attributed to positive impact differences in Q7 and Q1 that showed teachers' increased ability to implement specific strategies to create a language-rich classroom and incorporation of newcomer students' prior knowledge and experiences into their lessons, respectively. Lastly, a positive shift in teachers' ability to connect lesson implementation to subject matter content instruction using an ELD strategy (P5) can be attributed to teachers' demonstrated growth, on average, in identifying some unique features of language within their respective content area (Q3), determining and using supports for newcomer ELs in their content area (Q4 and Q5), and in helping newcomer students use language functions to make meaning within their content discipline (Q9).

In some metrics however, two out of the three participants displayed stagnation or displayed no growth. Minimal shifts in language and content integration understanding around ELD strategies and subject matter content competencies, and in providing opportunities for newcomer EL students with varied language proficiencies to engage in higher order thinking were evident in P1, P2 and Q6. Additionally, minimal growth was observed in teachers' shift in language and content integration in practice. This was particularly apparent in the impact differences for teachers' ability to connect teacher and student actions to the lesson outcomes (P6) as well as teachers' ability to balance instruction to ensure newcomer students practice language use in various contexts and experiences (Q10) and in communicating language expectations to newcomer students (Q11).

A point worth noting was how the rubrics I used to rate the interviews and the performance task differed. For the interviews, I used a 5-point scale to reflect the 5-point scale that I used to ask participants during their pre- and post-interview. I created specific indicators for level 1, 3, and 5 ratings and used some level of quantification to address level 2 and 4 ratings. On the other hand, I used a 4-point scale rubric to assess the performance tasks. For the performance task rubrics, there were clear indicators of what warranted a level-4 response. However, levels 3, 2 and 1 used aspects of both quantifiable and quality of articulated responses along a gradient—mostly, some/limited and none, respectively—which might be considered less defined and somewhat subjective.

Finally, the impact data suggested that this design intervention supported the improvement of participants' capacity to shift their instruction to integrate language and content along the dimensions of language and content integration understanding and language and content integration in practice. The amount of positive impact differences in both the interviews and performance tasks altogether also provided a degree of validation to my assertion of a positive shift in teachers' capacity to integrate language and content in their instruction. I argue that this design intervention not only improved participant understanding and skill, but it also provided participants the opportunity to further interrogate their practice, asked deeper questions around language and content integration, and surfaced challenges and further inquiry that went beyond the scope of this design study. Despite these promising findings that surfaced, these findings were neither generalizable nor could I conclusively state the efficacy of this design study for broader educational situations because of the relatively limited sample size, n=3.

PROCESS DATA

Next, I present my process data activities and my analysis. In narrating the data collection for the process data, I organized the sequence of activities in phases that followed the teacher team cycle of inquiry. As I go through each phase and the corresponding activities, I provided the learning outcomes for each activity as well as recounted the pivotal events during the activity. Finally, I provided an analysis of the critical incidents after each activity.

Chronologically, the following activities occurred over 17 sessions:

Table 4.24: List of Activities in Chronological Order

Phase 0	Activity 1	Group Norming
	Activity 2	Student Subgroup Selection
Phase 1	Activity 3	Instructional Video Analysis
Phase 2	Activity 4A	ELD Strategy Discussion – focused on student-to-student interaction
	Activity 4B	Lesson Presentation, Presenting teacher: Allie
	Activity 5	Classroom Video Observation: Allie
Phase 3	Activity 6	Lesson Debrief: Allie
	Activity 7	Process Debrief: Allie
Phase 2	Activity 4B	Lesson Presentation, Presenting teacher: Ellen
	Activity 4B	Lesson Presentation, Presenting teacher: Jade
	Activity 5	Classroom Video Observation: Ellen
Phase 3	Activity 6	Lesson Debrief: Ellen
	Activity 7	Process Debrief: Ellen
Phase 2	Activity 5	Classroom Video Observation: Jade
Phase 3	Activity 6	Lesson Debrief: Jade
	Activity 7	Process Debrief: Jade
	Activity 8	Plenary Session
	Activity 9	Teacher and Student Interviews

At the end of Jade's process debrief activity, I included a plenary session where the three inquiry teams (Team 1, 2 and 3) within the larger grade level team of eleven teachers did an individual and small team reflection. Afterwards, each inquiry team presented a team poster about their learning to the larger grade level team. In addition, for the three teachers in Team 1 who were the my focus of this study, I interviewed each teacher after undergoing their cycle of inquiry and used a post-intervention interview protocol (see Appendix D) Lastly, to help

corroborate the data that I have collected from the activities and teacher interviews, I also interviewed the focal student of Team 1. I used a student interview protocol (see Appendix D) that paralleled the post-cycle of inquiry interview questions for the three teachers.

Table 4.25: Summary of Process Data Collection

Audio Recording
Sequences of meeting observations and interviews were audio recorded with some clips transcribed to report the data collected.
Observations, Memos and Field Notes
Collected meeting observations and impressions of various activities were utilized.
Critical Friend
A language and literacy expert who works with newcomer populations in NYC was consulted as a critical friend so that the researcher can reflect with someone on the data collected from the study.

INTERVENTION DESIGN (SEQUENCE OF ACTIVITIES)

PHASE 0: INITIAL PHASE

Activity 1: Group Norming (1 session)

In this activity, teachers were introduced to the Teacher Team Cycle of Inquiry. First, the school's instructional focus, WASC goals and upcoming WASC evaluation visit, and district instructional rounds inquiry question were presented. Then the goals and rationale for the Teacher Team Cycle of Inquiry (TTCOI) was introduced as a way to organize the inter-disciplinary team of teachers and how it connected to the school's broader goals aforementioned. A guiding document was used to help facilitate this discussion (see Appendix C). For this opening activity, the learning objectives were for teachers to:

- Orient themselves to the Teacher Team Cycle of Inquiry and how it connects to their current areas of work within their school.
- Understand how team dynamics and collaboration can be a powerful learning for all members.

Observations of Pivotal Events

In this session, the entire 9/10th grade level team was in attendance except for one person who was absent. I served as the facilitator, one of the teachers served as a note taker, another as the timer and one teacher served as a process checker. The instructional coach was taking observational notes during the session. There were norms indicated in the agenda that the group had been using during their meetings. The group added, "Be open to ambiguity and non-closure" as one of the norms of every meeting. Prior to this session, all the 9/10 grade level team teachers (11 teachers) took the baseline performance task where they had to analyze a lesson plan, then watch a video and use a video observation guide to jot notes as to how the teacher utilized an ELD strategy to teach a content, and lastly look at student work that resulted from that lesson in

the video. Teachers then engaged in two small group discussions around the performance tasks, one for math/science teachers and another for humanities teachers.

The guiding document (see Appendix C) to help draw the intersection among the various school priorities was utilized to anchor the initial discussion. Teachers were asked to look at the where these priorities intersected and how they connected to one another. These priorities included the school-wide instructional foci, the WASC goals and upcoming evaluation visit, and the school's inquiry question as part of the district's instructional rounds initiative. Teachers shared their observations on the guiding document and made connections around salient points made during the discussion. I then introduced the Teacher Team Cycle of Inquiry as a way to connect some of these school wide priorities, particularly around student collaboration, language and content integration, and professional development training that applied new knowledge and practice in the classroom.

Near the end of the session, teams of three to four teachers were then introduced to the entire grade level team. The instructional coach and I formed these small group teams based on the amount of shared students among the teachers. Additionally, the decision to organize the inquiry teams in small groups was influenced by the needs assessment data where teachers claimed to enjoy working in small groups, preferred to get feedback and to learn from their peers about strategies and practices. For each of these small group teacher teams, we generated a list of about 20-25 students whom the teachers shared. Team 1, comprised of teacher Allie, Ellen and Jade, was my unit of study for this design development research.

During the process check, one of the members of the 9/10 grade level team, from Team 3, expressed his concern about the relevance of this work to his own practice. He articulated this as:

> *"I teach all GE now… there are practices in there [referring to the video] that I picked up that I wanna try in my class, but the larger scope of why we are here, I don't know if it helps me, because I teach all GE (General Education)… I just know that I'm sitting here and I just don't know if this is the best use of my time."*

Another teacher from Team 3 interjected, and said:

> *"I too felt that way in parts of the lesson that they observed as well [referring to the video they watched]… but I do think that seeing the practices helps and the lesson materials as well, but the way it helps me is thinking about group work since that is something I'm working in GE so seeing the group work structures and what could translate is helpful…"*

Analysis of Activity 1

Certain group processing elements were observed throughout this meeting. For the most part, roles were assigned to members of the team and protocols were followed. All members followed group norms and were open to hearing other members' opinions. There were instances when members displayed tolerance in other people's opinions. The process check for the meeting acknowledged both accomplishments and areas of improvement for the team. As far as task processing, the agenda kept everyone on task and gave guidance and clarity to the meeting goals. In addition, the group agreed to include a new norm and to observe this during team meetings.

In terms of interpersonal dynamics, issues of motivation were brought to the surface /to the group's attention at the end of the meeting. One of the members articulated their uncertainty

as to how this work applied to students in their own class. The fact that the teacher disclosed their sentiments about the relevance of this work to their own practice showed a degree of safety and trust among other team members. Though participation was quite equitable during the small group discussions, during the large group discussion, only 5 people (in a group of 11) spoke. For this group, the decision to maintain small group discussions was perhaps the best approach in order to gain the most participation from all teachers.

There was a moment of emotional intensity when one of the teachers questioned how the observed video about a class of English learner students was relevant to his class, considering he "only teaches GE." What this comment surfaced was the misconception about the composition of "GE (General Education) students" in his class and to what degree the teacher knew about the language proficiency of the students in his class. It also provided insight to the teacher's conception of English learners: he viewed "English learners" as a monolithic entity, rather than understanding the various typologies of students under the broader umbrella term of English learners (Heritage et al., 2015).

As the facilitator, I reframed the conversation around how the Teacher Team Cycle of Inquiry anchored the broader school goals and what we could learn from the videos as it pertained to student collaboration. Additionally, the next activity was framed around understanding the student composition in all of the teachers' classes through data, which included English learners, served to deescalate the sense of irrelevance that one of the teachers expressed about the work around English learners. Finally, the large group was reminded as to how team dynamics and collaboration could be a powerful learning medium for all. In general, the meeting oriented teachers to the Teacher Team Cycle of Inquiry and how it connected to the larger school goals, and emphasized the value of collaborative work.

Activity 2: Student Subgroup Selection (2 sessions)

For this next activity, the goal was for teachers to develop shared criteria for language development and subject matter content and to connect these shared criteria to a research-based framework. First, in their small groups, they identified from a list of shared students who they wanted to focus on during their inquiry. These shared list of students included student data. The instructional coach and I prepared these lists of students and corresponding data. In introducing these prepared lists and data, a presentation was included around understanding the California English Learner Development Test (CELDT) data, English learner typology, and reading levels of students as a way to make informed instructional decisions. In their small teams, teachers selected three students from the list, and each teacher then individually applied their conception of language development and content understanding using a graphic organizer matrix. Teachers indicated in the matrix where the three selected students were located and provided a rationale as to why they placed the student in that particular area of the matrix. After some conversation with their small teams around where they placed the students, teacher teams then narrowed their list of three students to one focal student. As the large grade level team negotiated their understanding around language development and subject matter content using their rationale for placing students in the matrix, they then compared these shared criteria against a research-based framework. This resulted in the revised shared criteria that teacher teams applied in their respective inquiry cycles.

Observations of Pivotal Events

Two days after the first meeting, the 9/10 grade level team met again, but this time they were assigned into various small teams of 3 to 4 teachers: Team 1, Team 2 and Team 3. Team 1 teachers were the focus of this study, comprised of Allie, Ellen and Jade. For the first hour, I provided a 15 minute presentation for teachers around the five language proficiency levels on the CELDT (California English Learner Development Test) and the typologies of English proficiency used in the school district: Newcomer, Developing, and Long Term English Learners. In applying the content from this presentation, small group teacher teams then received their list of students that they all taught. This list of students included various students that ranged in language proficiency levels, as indicated in the accompanying student data. For team 1, the list of students included only newcomer students, who had only been in this country for less than 1 year.

Teacher teams had ten minutes to examine the student list and accompanying data, and then selected three students to anchor their team inquiry. They then engaged in an activity of placing their three selected students in a matrix as seen below.

Table 4.26: Student Subgroup Selection matrix

		SUBJECT MATTER CONTENT		
		LOW	MID	HIGH
ENGLISH LANGUAGE DEVELOPMENT	LOW			
	MID			
	HIGH			

For this part of the activity, each teacher located the three students in the Content/Language matrix. Then, each teacher individually wrote their criteria for both language and content on the bottom of the matrix based on their rationale of where and why they placed the student in that section of the matrix. Lastly, each participant shared her articulated criteria for language and for content. For Team 1 teachers, they selected Marco, Darwin and Lee as their three students. They then placed each student in their respective matrices. The results of Team 1's student placements are shown in the table below.

Table 4.27: Team 1 Student Subgroup Selection Matrix

		SUBJECT MATTER CONTENT		
		LOW	MID	HIGH
ENGLISH LANGUAGE DEVELOPMENT	LOW	Marco (Allie) Marco (Ellen) Marco (Jade)		Darwin (Ellen) Darwin (Jade)
	MID		Darwin (Allie) Lee (Jade)	Lee (Ellen)
	HIGH		Lee (Allie)	

Table 4.28: Team 1 Student Placement Rationale

Student	Allie	Ellen	Jade
Marco	I put Marco in Low for both because it takes him a great deal more time to do both ELD tasks and content-specific tasks compared to his peers.	I placed Marco in Low for English Language Development because although Marco often tries to use new English phrases that he has learned when he communicates with me, but his understanding of directions and ability to communicate his ideas in English is very minimal. As far as content knowledge, he struggles tremendously to complete tasks appropriately, even if he works consistently the whole period. He does understand many concepts in the course, but at a much slower pace than the average newcomer student. He also has trouble connecting ideas in math and is more successful working on isolated concepts one at a time.	I placed Marco in low for content and low for content and language development because he has limited education so little experience with literature and writing and almost no prior exposure to English.
Darwin	I put Darwin in Mid for both because he asks questions about English words a lot as well as content. His questions demonstrate that he is thinking about the content, and are often indicate that he is curious and thinking deeper. He's not just asking questions about the basic tasks.	I placed Darwin in high for content knowledge, because once I explain something in Spanish, he is able to perform and connect ideas well. He does need more support in Language development, which is why I placed him in low for language development.	I noticed that Darwin has strong critical thinking skills and analysis with the content so I placed him in high, but he is still struggling to learn English, although he is learning quickly.
Lee	I put Lee in mid for ELD and high for content knowledge because he acquires and applies new content vocabulary quickly, but still struggles with basic grammar constructions.	I placed Lee in mid for language development because he struggles to explain his work in English, both written and orally. He does have fairly high content knowledge, it seems more from previous experience though than what he has learned here in the US.	I put Lee in mid for both language development and content because he is not a beginner but still can improve in both areas.

Once Team 1 members shared their rationale and where they placed the students in the matrix to each other, they then created a team list of indicators of what they identified as language development and subject matter knowledge. Each team created their team's list of indicators. In addition, Team 1 decided to select Marco as their focal student in their cycle of inquiry. Teachers were engrossed into talking about their students with their colleagues and writing about them. The meeting ran over 5 minutes and the bell rang. The teachers were still engaged in the conversation and wrote about the selected students even after the bell rang.

On the second hour of this activity, held 5 days later, every team's list was then shared with the entire 9/10 grade level team. Team 1 and the rest of the 9/10 team generated a list as seen in the table below which was captured by the facilitator on a poster paper.

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Table 4.29: Language Development and Subject Matter Content Indicators

Language Development	Content
• Writing and grammar • Verbal production (speaking) • Listening comprehension • Elaborate/explain • Understanding directions (general) • Translation/native language use	• Higher order thinking/abstraction • Effort • Reasoning • Work completion • Guidance from teacher through demo/modeling • Connecting concepts/analysis • Providing details/elaborating • Work independently

After generating their group list of indicators, the 9/10 grade level team was then introduced to a research-based framework by the facilitator that drew from the knowledge base around language development (Bunch et al., 2013) and subject matter knowledge (Alexander et al., 1994). Jade commented that some of the indicators presented from the literature were broader, meanwhile what the grade level team surfaced was more specific. The table below summarized these indicators from the knowledge base.

Table 4.30: Research-Based Framework

English Language Development	Subject Matter Knowledge (Content)
• Oral /Aural Proficiency • Reading/Writing Skills • Native/Informal Language Use • Academic Language Skills • Consistency in procedures	• Consistency in procedures • Clearly articulates topic knowledge *(lines and slope; respiratory system; Black Lives Matter movement; Lord of the Flies)* to domain knowledge connections *(functions; human body system; systemic oppression; human nature)* • Recall of content specific information (distinguish less important to salient with no difficulty) • Distinguishes degree of importance in text/any source information • Navigating abstractions • Personal investment and interest

Upon juxtaposing both teacher-generated indicators and the research-based framework, the 9/10 grade level team settled on a shared list of indicators that defined language development and subject matter content. This shared list of indicators is shown in Table 4.17.

Table 4.31: Shared Language Development and Content Knowledge Indicators

English Language Development	Content

• **Oral /Aural Proficiency**
  -verbal production (speaking)
  -listening comprehension
• **Reading/Writing Skills**
  -writing and grammar
• **Native/Informal Language Use**
  -translation
  -code switching
• **Academic Language Skills**
  -elaborate and explain (language to…)
  -understanding directions (in general)
• **Consistency in procedures**
  -for example "Eyes on me… "
	• **Consistency in procedures**
	  -guidance from teacher through demo/modeling
	  -work independently
	• **Clearly articulates topic knowledge** *(lines and slope; respiratory system; black lives matter movement; Lord of the Flies)* **to domain knowledge connections** *(functions; human body system; systemic oppression; human nature)*
	  -connecting concepts/analysis
	  -providing details/elaborating
	• **Recall of content specific information (distinguish less important to salient with no difficulty)**
	• **Distinguishes degree of importance in text/any source information**
	• **Navigating abstractions**
	  -higher order thinking/abstraction
	  -reasoning
	• **Personal investment and interest**
	  -effort
	  -work completion

Analysis of Activity 2

In the matrix activity, all three teachers consistently placed Marco under the low content and low English language development rubric. On the other hand there were some agreements

between Ellen and Jade for Darwin's matrix placement, whereas Lee's placement had no agreement among teachers at all.

Interestingly, Allie, Ellen and Jade had variations in describing their rationale for placing Marco in both low content and low English language development. They all placed Marco in the same quadrant of the matrix, yet their reasoning varied. For Allie, she justified her placement of Marco in low-content, low ELD because *"it takes him a great deal more time to do both ELD tasks and content-specific tasks compared to his peers."* This bore resemblance to Ellen's justification: *"He does understand many concepts in the course, but at a much slower pace than the average newcomer student."* However, Ellen added that, *"Although Marco often tries to use new English phrases that he has learned when he communicates with me, but his understanding of directions and ability to communicate his ideas in English is very minimal"* and that *"he struggles tremendously to complete tasks appropriately, even if he works consistently the whole period."* In terms of his content understanding, Ellen added, *"he also has trouble connecting ideas in math and is more successful working on isolated concepts one at a time."* Jade's reasoning however differed from both Allie and Ellen. She wrote, *"because he has limited education so little experience with literature and writing and almost no prior exposure to English."* This showed Jade's level of understanding of Marco's current language and content development status as a byproduct of his prior knowledge (or lack thereof) and life experiences from his home country.

Unlike Allie and Ellen, Jade's level of understanding of Marco's level of language and content were neither based on ability to produce work at a faster rate, nor about task completion; rather, she situated it on Marco's prior schooling experience and limited exposure to literary content, in his home language as well as in English. This range of reasoning for their placement of students in the matrix showed the varied conceptions of how teachers viewed language development and content knowledge. Common in both English language development and subject matter content lists was the indicator, "consistency in procedures." I understood this as some "form of consistency" on how to do a particular skill that supported English language development and content understanding. For example, being able to consistently perform a writing task or math task showed a level of a student's content understanding; However, for English language development, this spoke to consistently being able to read directions, do a task if working as a pair, group or individually, and being able to effectively produce (written/spoken) language when asked to perform a particular task.

By surfacing these variations in understanding of language and content among teachers, the process transpired the need for teacher teams to norm around a shared language on how they would discuss English language development and content knowledge integration. As the 9/10 grade level team began to highlight common patterns among each of the small team's list of indicators, they then negotiated which ideas were important for them and then compared these ideas to a research-based framework. The 9/10 grade level team found the intersection between how their team-generated indicators fit within the research based framework, and decided to adapt a hybrid framework based on research and their self-generated list. Team 1 adapted and used this team-consensus framework for their cycle of inquiry. For this two-hour activity, teachers constructed a shared understanding of content knowledge and English language development indicators.

Activity 3: Instructional Video Analysis (3 sessions)

This activity was divided into three different sessions. First, the teacher teams analyzed the provided sample teacher lesson plan and engaged in a discussion about salient learning from the lesson plan. Second, teachers watched a video of a teacher implementing the lesson plan that participants analyzed and discussed. Teachers were using a classroom observation guide to capture notes as they watched the video. The video observation guide then provided focus questions for teachers to identify effective ELD instructional strategies that leverage English language development through student-to-student interactions and articulate ways that subject matter knowledge is taught through the student-student interactive instructional strategy. Lastly, teacher team members engaged in looking at student work that resulted from the lesson they watched on video. The objective of enacting this sequence of analysis—from lesson plan, to lesson implementation, and then student work analysis—was for teachers to recognize teacher expectations with actual student performance level as well as build teachers' capacity to articulate ("look-fors") the ways in which subject matter knowledge can be integrated within ELD strategy that promoted student-to-student interactions.

Observations and Analysis of Pivotal Events

Part I: Lesson Plan

During the lesson plan analysis, participants made meaning and normed around what the teacher's intention was around the sample lesson plan. Participants, for the most part, followed the series of questions to help deconstruct the lesson plan (see Appendix C). This activity included participants to examine the teachers' lesson plan, the accompanying student graphic organizers and activity guides, and teachers' notes about the student groups during the lesson.

The teacher team acknowledged the Zwiers framework—the five thinking skills of elaborate/clarify, support with examples, paraphrase, challenge, synthesize—that the teacher wanted the students to use in order to engage in their literature circles. They also recognized that the teacher chose the reading to connect students' own personal lives as first generation students and to promote a college bound mindset. The participants all agreed that the teacher's language objective was for students to use the five Zwiers thinking skills (language functions) including elaborate/clarify, supporting with examples, paraphrasing, challenging ideas and synthesis, to engage in oral conversations about the current chapter in the book that they were reading. The participants identified the use of academic language and listening for these academic language as some of the central concepts that the teacher intended to teach in the lesson: This included the skill of utilizing the afforded sentence frames for each language function, providing details from the text to support their ideas, and using transition words to build on or challenge other students' ideas. The teacher team anticipated that students would understand the concepts of this lesson as, *"using the sentence frames to talk to members of their group about the book."* In recognizing how the teacher planned to bridge the students' conception with the teacher's understanding of the lesson, the teacher team discussed how the jigsaw structure in and of itself served as a scaffold for students to first have some time to learn and discuss the content of the chapter in

their role groups; this better prepared students to transition into their discussion groups comprised of four to five students with varied roles.

Teachers discussed the structure of the lesson and how it varied in level of difficulty based on jigsaw group discussion. They surfaced how the structures of the jigsaw—that the teacher planned to implement during the lesson—would enhance the depth of the conversation among students around the text. They described the ways in which the content of the lesson became apparent through the discussions where students could generate their own ideas, not just during their role groups, but also *"in real time… beyond just reporting out."*

Halfway through the protocol, Allie noted that some of the questions sounded much like the other questions, so the teachers requested to adjust the questions of the protocol to discuss what they liked about the structure of the lesson and how they might adapt it to their own practice. The team wrestled with the fact that this lesson in the video was designed for a 12th grade class. The students in the video would have had three years of exposure to these structures, allowing them to engage with each other in a specific way. The teachers argued that since they teach 9th and 10th graders, part of their realization was the fact that they themselves would have to build this foundation for the newcomer students. After they acknowledged this, they asserted that their own 12th graders in the school could do this as well, assuming such interactive practices were happening during instruction in the 12th grade classes in their school.

Jade surfaced her concern around the equitability of the student roles and groupings in the lesson (relative to the content rigor of what was being asked for each role). The teacher team engaged in the discussion as such:

> Jade: *"I've been wanting to do a literature circle like this. I really like the idea of them [students] going off and having certain task that they're doing or a quote they're looking for… I feel like for 9-10 grade, I think there needs to be... something where they're coming back sharing their knowledge before they go into just a discussion… There needs to be a step in between to make sure there's really comprehension behind it [the content of the text]. I worry how equitable these [referring to roles] are in terms of like reviewing the text… if the person [word searcher role] is just doing the vocab, they're just scanning and not so much reviewing what they're reading [about the text]. The other roles [Discussion Director, Summarizer, Illustrator] looks more about the bigger picture [of the chapter in the book that they read] … so I'd probably change that role to something else..."*
>
> Ellen: *"I think the idea is though they do this every Wednesday over a course of a semester… everyone is gonna be the word searcher at least twice..."*
>
> Allie: *"I don't think it's that inequitable because they're suppose to find key words that are important not just new words, right? So to have to decide which words are important is 'distinguishing the degree of importance'… I think that could be really challenging as long as the kids understand that that is expected."*
>
> Jade: *"or they explain why they chose those words..."*

Analysis of Part I: Lesson Plan

The teacher team began their conversation with fidelity to the protocol using the questions to guide their conversation, but as the discussion progressed, the team wanted to break

protocol and adjusted the questions based on their needs. Little et al. (2003) described this phenomenon as teachers making choices to employ modifications in protocols based on their interests; since the prolonged and authentic conversations occurred when teams took a flexible, creative approach to afforded tools and crafted them to their own needs. However, some of the protocol questions needed clarification for the teachers and had to be rephrased by the facilitator. This led me to believe that some of the protocol questions were not as teacher friendly as far as the way the questions were worded which meant that the questions needed to use language that was more comprehensible for a broader teacher audience.

The idea of consistent structures over time implied that students strengthened their understanding of the content and the language development learning if students gained familiarity and automaticity around the classroom structures and processes. As Ellen explained, *"they've already seen these things over a span of 3-4 years so they're actually like ready to make real connections now."* Additionally, the graphic organizer layout that students used in the lesson had a specific orientation that the teacher team also appreciated in terms of its utility. The team recognized that the use of group roles was another layer of scaffolding. Students not only had an opportunity to practice academic language in English to talk about the content of the text from the lens of the role that they played, but also as Jade noted, the idea of students going to role groups to share their knowledge before going into a discussion group served as a step in between to ensure students comprehended the content within the text they read. Moreover, Allie used the term "*distinguishing the degree of importance (in text/any source information),*" drawing from the subject matter knowledge shared indicators from Activity 2, to argue that group roles—in this case the word searcher role—pushed students toward higher order thinking in terms of content, as long as the expectations were defined and understood by the students.

These exchange of ideas among Team 1 teachers helped deconstruct the lesson to the crux of how content and how language learning were developed and supported through the lesson design process and structures. The discussion around roles and how the groupings changed (role groups before discussion groups) within the planned lesson helped uncover the intentionality of the teacher to compel students to first talk with their role groups in order to get to a deeper level of content understanding before engaging with their discussion groups to engage in extended talk. The process and structures afforded students the time (grouping structures) and tools (sentence frames) to authentically discuss the text (the content) in English, and produced independent responses in real time. Though the structures and processes that the teacher used in the lesson allowed for that depth of conversation to happen among students, it was most important to investigate how students actually used the sentence frames, which would be part of the next step of observing the lesson implementation.

Part II: Video Observation

For this session, teachers revisited their notes on the lesson plan. A compilation of the three small teams notes from the lesson plan analysis activity was shared to the entire 9/10 grade level team to show how other teams responded to the discussion questions from the lesson plan analysis activity. Teachers then discussed salient points and patterns from the shared document and applied this to the video that they watched. The teachers watched the video of the teacher enacting the lesson plan that the teacher teams analyzed from the previous activity. They individually jotted down notes using the video observation guide and then discussed the video using the provided guiding questions.

From their video observation guides, teachers wrote various notes connected to the

indicators of English language development and subject matter content.

Allie's notes included:
- *The "routine" of the classroom and how the students know this "for the most part" engaged students*
- *Students wanting to participate and "sees the value" of what they are working on*
- *Students "know each other" as evidenced by "move to ___'s table" and students knowing where to go*
- *Students asking each other for help instead of the teacher; students see each other as "resources"*

Ellen's notes included:
- *The structures/roles for lit circles were learned because of the way the transition was executed in the class*
- *The practice of tracking reading on the text while someone else is reading was taught to them prior to or a learned practice they've had in prior years*
- *The participation quiz was effective because students were on task in what was being asked by the teacher.*

Jade's notes included:
- *Students' familiarity with the routine; the idea of established routines/processes/structures in the class that students have learned.*
- *Students' working in groups and finishing work independently without much teacher support.*
- *Students' use of academic language frames as an expectation; not only articulated by the teacher throughout the lesson but also holds them accountable to it; evidenced by feedback in the end.*

As a larger group they surfaced:
- *Students will use the 5 Zwier's strategies in their discussion*
- *Students will perform their Lit. Circle roles in order to engage with/understand the text.*
- *Students would understand the task as, "We're supposed to read the chapter together and talk about it… We're supposed to use the frames to help our discussion… We all have roles that we are supposed to do in our reading groups."*
- *The individual portion of the assignment asks students to make connections between their lives and the text; answering questions about a book and connecting a character's story to our own lives*
- *The prompts are open ended and allow for student elaboration*
- *The recording and notes allow the teacher to follow up on individual students and listen to what they're saying*

After watching the video, teachers engaged in a discussion to debrief what they saw in the lesson. Allie, Ellen, and Jade's conversation focused mostly on the process of what the teacher in the video did to get students to interact and how those parts of the process either

allowed for superficial or deeper discussion (connecting ideas to themselves or connecting ideas to text). The teachers commented on how the process/structures enacted in the lesson allowed time for students to think and write individually about the text they read before the students went into their groups to discuss their understanding of the content in the text they read. In their discussion:

> Ellen: I also felt like they [students] did it [the task] though; I don't know the depth of the responses, but they probably have similar questions every time so they probably know what to expect and they're probably thinking about that while they are reading;
> Jade: Plus the first two [questions on the student graphic organizer] is about their own lives; only the last one [question] is really about the text [content that the students are reading];
> Allie: It seemed like when they were in their role groups, they had a lot of time to talk and build on each other's ideas…
> Ellen: Yeah, I noticed that while one student would be talking, every other student was writing what he was saying or something along the lines of that…

In addition, they found moments in the video that allowed for students to demonstrate extended talk and how students used the sentence frames or language functions around sequencing such as first, then, and finally. As Allie recalled:

> Allie: "I do remember in the summarizing role group there was one student who was talking and saying, "First we can say this... then...," and the other student seems to be nodding along like that's something I wish we could see in 9//10 more; like just the looking and listening to show they understand what their partner is telling them about the [content in] text."

Moreover, they noted how students translated from English to their primary language (L1) and vice versa, and how students were learning from each other by translating for one another and clarifying parts of the text with their group members to better understand the content of the text.

> Ellen: There was that group that was reading too when the girl is like, "This is what this means…" and they were switching in Spanish and they were talking for like a minute in Spanish…
> Allie: Oh yeah, because the text was in Spanish and the one girl wasn't a native Spanish speaker and the text translated into English and she was like, "Oh so it means this..."
> Jade: That was cool.

Analysis of Part II: Video Observation

From the video observation guides, all three teachers identified "routines" and structures in all their observations and inferences. This could be attributed to how "consistency in procedures" was a shared indicator that was both present in the English language development and subject matter knowledge columns (see Table 4.17) that the teachers co-constructed;

teachers perceived this particular indicator to serve as an essential mediating construct in terms of being able to integrate language and content during instruction. As evidenced in Ellen's comment, she mentioned that students seemed to have completed their work (a subject matter knowledge indicator from Table 4.17) based on what she saw in the video, though she cannot ascertain the students' depth of understanding. She added that the students *"probably have similar questions every time so they probably know what to expect and they're probably thinking about that while they are reading."* Ellen's assumption around how students were able to complete their work was attributed to the "consistency in procedures," which helped students understand the content of the text since students knew the expectations in the group discussions and were already thinking through the questions as they were reading the text to understand the content. Jade however noted that, *"the first two [questions on the student graphic organizer] is about their own lives; only the last one [question] is really about the text [content that the students are reading]"* which revealed the depth of the questions that students were being asked to answer. Jade asserted that some of the questions asked students to connect a concept to self, while only one of the questions in the graphic organizer pushed students to analyze the content within the text, which was more difficult. Lastly, Allie added that, when students were in role groups, this consistency in procedures allowed students to have *"a lot of time to talk and build on each other's ideas,"* which to her meant that the structure of the role groups enabled students to connect concepts, to provide details, and to elaborate about the content of the text. Ellen supported Allie's claim: *"While one student would be talking, every other student was writing what he was saying [about the text] or something along the lines of that."*

In one part of the video, Allie remembered that the summary group utilized paraphrasing from the Zwier's framework using the sequencing words to recall salient details and information from the text. She added that there was an acknowledgement from another student that he understood the content of the text through his nodding gestures. From Allie's perspective, these student actions demonstrated students' ability to effectively use sequencing words to paraphrase their understanding of the content from the text. There were limitations however as to how the teachers were able to capture detailed evidence from the video they watched. This was partly due to how teachers only watched the video once; if the teachers had watched the video twice, once to watch for the language development indicators and another to watch for the content, perhaps a more detailed account of evidence would have promulgated.

The use of students' primary language (an English language development shared indicator from Table 4.17) also surfaced as a way to deepen students' understanding of the content. Ellen raised the conversation between two female students in the video who were speaking in Spanish about the text. Allie clarified that a section of the text that students were reading was in Spanish; since one of the girls' primary language was Spanish, she was able to verify her partner's understanding of what the Spanish text meant and how it connected to the content. This student-to-student interaction between a Tagalog-speaking student and a Spanish-speaking student in the video demonstrated how primary language use could serve as a bridge to content understanding while developing language.

It was evident in the video as to how these lesson structures contributed to the overall classroom culture, but it also became apparent as to how the processes facilitated a focus on student learning around content and language development. In addition, the systems and routines evident in the classroom promoted engagement, as the three teachers acknowledged. This engagement took the form of how students valued their participation in class discussions and activities, and how students used each other as resources during the lesson. Connected to the

impact data, Allie raised the issue as to what degree did higher order thinking applied to newcomer students relative to their language proficiency. She grappled with the idea of how students reached to the level of analysis when summarizing seemed like an easier or accessible task for newcomer students.

Consequently, student behavior was a topic that surfaced in the discussion. Jade articulated the degree of independence that students exercised in the video and their inclination to seek other students as resources rather than immediately calling the teacher for help. All teachers chimed into this idea of developing students' capacity to see each other as resources and how the collaborative structures, in addition to the clear expectations set by the teacher, promoted this classroom culture for students. Though, as Ellen claimed, what the video displayed was within the context of how the students would have had multiple opportunities spanning over two to three years to get accustomed to this level of collaborative expectations.

Part III: Student Work

For this session, teachers analyzed two sets of student work. One was a group of four students' writing samples, and another was a recording of the same student group's literature circle discussion. Teachers were writing directly on the student artifacts, circling and highlighting salient observations that they made. For this section, teachers continued to use the graphic organizer, along with the video observation tool to capture notes on the student work provided (see Appendix C). Once they examined both sets of student-produced artifacts, they then engaged in a discussion using the looking at student work protocol. Notable during this discussion, teachers referred back to the lesson plan they analyzed previously to connect the teacher's intention in teaching the lesson with how it actually manifested in the video.

In each of their graphic organizers in looking at student work and as a team, the teachers wrote:

TABLE 4.32: LOOKING AT STUDENT WORK ORGANIZERS

Teacher	Looking at Student Work Guide
Allie	- Each did their role which was the content objective - The connection questions were not explicitly in the objectives, but their expectations were to both comprehend in English as well as make personal connections to the content I don't think they're really using the sentence frames - they are all just going around answering each question, but the discussion director seems to be building on conversation just not using the specific sentence starters -They can use words in the question to create the sentence for their answer (e.g. Why is it important? It is important because...) -Predictions show how much students are thinking - 3 made reference to another character that was not in the summary -Discussion questions -Different spoken and written English -Each student had a role before class began - differentiated for their language development -Giving feedback mid-way about what kind of discussion he is hearing and what he wants to hear -Suggesting to look at the sentence frames -Connects content to other classes - interdisciplinary -Writing full sentences! -Reading in a group - but did they talk to each other very much if they didn't understand? -Did all the students really understand when they were reading? Could they reference the text when they were doing their role? How much copying happened in their role groups? -Restating question for students who had not yet answered during discussion -Probing question - "does your family have jobs?" "Relate is like connect…" -Another Chinese student makes connection to the holiday vs. connection to the job
Ellen	-They were expected to perform their role in the reading circles with their role groups. -Each student was able to answer the reflection questions on the front and complete their role. Is it intentional for all discussion directors to have the same questions?

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	-It feels really hard to analyze without more knowledge of the content, but it seems that students used their knowledge of the routines and group norms to help them complete the tasks. 2 min warning -- if you have not looked at the sentence frames Discussion: Relating their lives to the job - not exactly synthesizing the text though. DD asking each student the questions -- not just posed to the group for the first person to answer
Jade	They need to find evidence from the text to complete their roles The word searcher didn't have to explain why he/she chose those words so there is less use of evidence. I'm wondering if the individual reading work connects to the discussion? Teacher practiced these routines so students were familiar and able to complete tasks with little teacher support Students read through the chapter and completed their roles as a team Discussion: Students are helping explain key word from question. A lot of sharing their ideas, which is great, but didn't hear much of the academic language practice.
Whole Team Notes	Based on the student work, it's difficult to assess if each student used all five language skills. However, in the instructor's notes, on average most students only hit 1-2 of the language skills (most students, elaborated) I think student thinking also takes place during the "Discussion Directors" segment of the group sharing. Students are making connections to their own lives and sharing their experiences with one another. Another student also clarifies the vocabulary word, "What is [the meaning of] relate?" Student didn't understand the word "relate"; student provided synonym connect. Students paraphrasing each others' thoughts: Both the summarizer and the illustrator did a good job going over the main points of the article, but it seems like there could be more detail. Explanation / clarification of the word "doctorate" by teacher. Teacher encouraged students to use certain words, like synthesize, to discuss in their groups. Teacher acknowledged the use of words as he walked around the room, anticipating more students to use the word bank. Describing connections but not having the words to describe them and getting help from group members (Santa Claus) for example.

In the following conversation excerpt, the team explored whether students were really synthesizing during the discussion and if they were not, they investigated what prevented students from doing so. Noticing there was three minutes left of the recorded student group conversation, the team realized that the students in the recording still have not used any of "synthesis" sentence frames or question stems that were provided by the teacher on their tables. This led them to wonder how the teacher ensured that students were using the sentence frames, but more so, how the students actually understood the content to be able to synthesize what they read. The teacher's original intent from the video was to have student groups synthesize to push themselves during the literature circle activity; yet Allie, Ellen and Jade realized that the questions that students were answering during their discussion did not seem to lend themselves for synthesis level discussions. Their conversation included:

> Ellen: "Like have they used all five [language functions] before? My thought was maybe they've done it one by one... already and that this was the bring it   all together... so yeah maybe the suggestion was breaking it down like you have to synthesize today rather than choose between the five and pick elaborate   since its the easiest...
> Allie: "I also think… when you're asking the students to generate the discussion… actually the discussion questions may not necessarily lead them to synthesize… and maybe if you want them to synthesize then maybe he [the teacher] should've added his own discussion question like you gotta do this one first..."
> Ellen: "or at least facilitated himself the discussion group when they were talking about the discussion questions."

This brief discussion around why students did not meet the goal of the use of synthesis sentence frames raised the question: Since discussion directors in the group were charged with writing the

questions, did the discussion directors know how to create a synthesis question? In addition, Allie highlighted that the questions themselves may not lead to a conversation about synthesizing the text they read, implying that students may not know that particular skill or perhaps the teacher needed to be more intentional about guiding students towards a conversation that had students synthesizing the content from the text.

Team 1 teachers then discussed modifications as to how they would revise parts of the lesson to support students to be able to synthesize. Some of their suggestions were to gradually scaffold the use of the five language function sentence frames to help students build their stamina in using one or two language functions at a time until they gained fluency over time to use all five. Another suggestion was:

> *"And that had the questions been framed in the way of the language frames... then they [the students] would have used the language frames to answer those questions... so maybe that's another tweak to the discussion director group, [is] to only ask questions using those [synthesis] language frames... because they [students] would have tried to answer that question... they would have learned to synthesize… but I don't think it was put on the Discussion Directors to use the question form of this [synthesis sentence frames] to create their questions…"*

The group explored the idea that if the discussion directors were explicitly taught to use the accompanying question frames around synthesis to generate their discussion questions, then the discussion would have led students to use the synthesis language frames as intended by the teacher.

A noteworthy point that Ellen raised in the discussion was around what students were able to demonstrate in their work and in the lesson, despite not meeting what the teacher had planned for the students to be able to perform during the lesson. In this excerpt, Ellen mentioned that even though the students were not using the specific language frame of synthesis that the teacher intended, the students were still using some form of language frames (utilizing a different language function) that were not explicitly planned in the lesson. Ellen asserted this as follows:

> *"One thing in terms of the language goal… Even if they didn't use a ton of the language frames that are set out for them, I feel like they [students] still used language frames that weren't actually written to any of this discussion about how if a question is asked… they [students] know how to change the question into the beginning of their sentences like, 'Why is it important?... It is important because....' Even though it's not necessarily one of the language frames that he [the teacher] presented... that's a skill."*

Ellen recognized that students knew how to answer a question using parts of the question to start their response, a skill that students learned and employed in their discussion.

Analysis of Part III: Looking at Student Work

This activity allowed teachers to further investigate where students struggled during the lesson, what their specific challenges were, and what modifications to the instruction/process that could be done to support students' learning and skill gaps. In discussing the student work, teachers not only identified students' current ability and skill to create responses using words

from the questions, but also provided suggestions as to how to improve it in order to address where the learning broke down for the student. In this case, the teachers identified that perhaps students who held the role of discussion directors in the lesson had not been taught how to create synthesis questions. However, the teachers argued that, had the students been explicitly told to utilize question stems that would have generated synthesis questions, this would have allowed students to apply their skill of using words from the question as part of their response to generate synthesis statements.

Moreover, Allie noted in her observations that one of the students in the video restated a question to another student when he did not understand the question posed by the discussion director: *"Does your family have jobs? 'Relate' is like 'connect'…"* Allie also noted that another Chinese student from the video made a connection to the holiday (Christmas) vs. connection to the job (of the character in the text). She even included in her graphic organizer how the students connected the *"content [of the text] to other classes – interdisciplinary,"* referring to how the students alluded to the concept of human nature during the discussion that they were learning in their other class. In contrast, Jade was particularly looking for students' use of academic language. Jade recognized that students *"needed to find evidence from the text to complete their roles"* and that *"there were a lot of sharing their [students'] ideas*, but she *"didn't hear much of the academic language practice."*

One challenge for teachers, particularly for Ellen, was being able to better articulate what they were seeing in the student work as it connected to students' content understanding. As Ellen noted in her observation guide, *"it feels really hard to analyze without more knowledge of the content, but it seems that students used their knowledge of the routines and group norms to help them complete the tasks."* Recall that task completion was one of the shared indicators for subject matter knowledge (see Table 4.17) that the teacher team co-created. For Ellen, her difficulty of finding evidence of analysis from the student work stemmed from her wanting more knowledge of the content that students were learning from the text. Though Ellen acknowledged in her observation guide that "[students] *relating their lives to the job [is] not exactly synthesizing the text,"* she inferred students' task completion through the classroom routines and group collaboration as students being able to demonstrate their knowledge of the content. In hindsight, one artifact to include in the lesson plan analysis activity could be a copy of the chapter in the book that students read in the video. For a teacher like Ellen who struggled to gain more familiarity with the content of the text that the students read in the video, this could help address this issue.

This section of Activity 3 exercised teacher's ability to connect student artifacts with teacher instruction. Part of it was teachers' recognition of the current skills and prior knowledge of students, while another factor would be identifying modifications to the ELD strategies observed so that students could use language functions in order to make meaning with the content. For this sequence of sessions for Activity 3, teachers reconciled and explored the dissonance between the teacher's expectations with the actual student performance in the lesson. The activity also supported teachers' capacity to recognize how the content from the text could be integrated within an ELD strategy that promoted student-to-student interactions using the shared language and subject matter content indicators.

PHASE II: IMPLEMENTATION PHASE

Activity 4A: ELD Strategy Selection and Discussion (1 session)

For this activity, teachers were to select as a team, with their focal student in mind, one ELD strategy on promoting student-to-student interaction in teaching their subject matter content. This required them to articulate their reasoning as to their selection process and criteria. Teacher teams referred to an inventory of resources for ELD strategies—collaborative conversations, which the school and teachers had used in the past. The objective for this session was to understand teachers' reasoning for selecting a student-to-student interactive ELD strategy and how they were thinking about implementing it to teach their content.

<u>Observations of Pivotal Events</u>

Recall from Chapter 2 that this study aimed to develop teachers' ability to teach their subject matter content with a clear and deliberate focus on academic language, vocabulary, and structures for student talk. For this meeting, only Ellen and Allie were present since Jade was out for a district-wide PD for the entire day. Jade followed up with her teammates about what she missed during this team meeting in a separate convening. Nonetheless, both Ellen and Allie looked at the various student-to-student interaction strategies that they could use as a team during their inquiry cycle. Both teachers referred to a bank of ELD strategies resource, around collaborative conversations, that they either had been exposed to before or had used prior. The guidance around selecting an ELD strategy simply asked teachers to consider the content of their upcoming lesson that they were about to teach with the focus on their team's student of inquiry. For this teacher team, it was Marco. However, with the plethora of options within that ELD strategies for promoting collaborative conversations—pairs, small group, large group—Ellen felt a bit overwhelmed with how to even decide on where to start. Ellen stressed:

> *"How could I possibly use three quarters of these [referring to the list of strategies in the resource guide]… to talk about how you solve a problem… I feel like it would have to be within a larger, analyzing project like integrating content you know... so I feel very at a loss for words and don't know how to support this decision…"*

However, as the teachers perused through the document, they began to negotiate as team as to how they might narrow down their options in selecting an ELD strategy that they could all use as a team to teach their next lesson in their respective content areas:

> *Allie: So what would be our goal for those three students [we selected] maybe that will help us pick one [strategy]. So maybe a different way to think about it is: What do you feel like... like for me, I really want students to be speaking more in my class. That's a goal for me.*
> *Ellen: I think all of us could afford some more oral conversations in our classes...and find different ways to implement it. So I would accept that as a group goal… more oral production in English...*
> *Allie: I think particularly for Marco I feel that it really leans more to his strengths… because it takes him a really long time to read and write, so I think more oral rich production would be a good scaffold for him to do other things. I would like to have something that fits in one lesson. Does that narrow it down? Something that we can do in like one class period…*

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Ellen: I mean one thing I'm thinking about, in math, either speaking or doing
something language-y (production), is to [have students] analyze a [math]
problem that's already done and find mistakes [in the problem], what was done
correctly [in the problem], what was done incorrectly [in the problem]… so
if you find something that fits in with your stuff that does something like that…
Allie: So you think of they'll [students will] look at something like a math problem, or an
image, then students react to it. For example, we are looking and talking about
how women are portrayed in the media. I could do that.
Ellen: Yeah.
Allie: That's kind of where I was thinking too
Ellen: I'm looking at the Quote Cafe.
Allie: That is like multiple ones [quotes] though... Is that what you want?
Ellen: No. I'm thinking more about one [student] has a card with a math problem
and then...
Allie: [Explains what the carousel activity is like since she has done it before]
Ellen: I mean [when] I saw this [before]… like the teacher prompts the whole
class with one conversation that they're really going to do… for me
[that's how] I was reading [this]
Allie: Yeah but you don't have to do it that way.

Analysis of Activity 4A

In this exchange between Allie and Ellen, we captured how both Allie and Ellen
negotiated how they selected the ELD strategy to use as a team to teach their respective content
for an upcoming lesson. Allie introduced the idea of having a goal for the team in order to
narrow down their ELD strategy selection. Ellen agreed with Allie and added Marco, their focal
student, in her explanation of selecting the strategy. Allie highlighted Marco's strengths and
acknowledged his areas of language development growth. Allie recognized that Marco needed
more oral English production, which in turn, with proper scaffolds, would help him become
more successful in other modalities. Here, Allie demonstrated some knowledge of Marco's L2
(second language-English) in various modalities, she mentioned, "*Particularly for Marco I feel*
that it really leans more to his strengths… because it takes him a really long time to read and
write... so I think more oral rich production would be a good scaffold for him…" In considering
Marco's current language development level, the teacher team reached a critical juncture in
terms of making a decision about the most appropriate student talk strategy to utilize across
various content that would best serve the needs of the focal student.

Also, Ellen and Allie named criteria around student expectations such as student
reasoning or justification involved, and students reacting to a visible image/object/text/math
problem. They included pragmatic criteria in their strategy selection for student talk: time
constraints to fit within one lesson; accessibility; repeatable structures. As Ellen explored one of
the possible strategies that she was considering—Quote Café—Allie explained to Ellen the
details of that specific strategy and provided clarity around what that could look like in a
classroom. Allie provided Ellen insights to some of the student talk strategies, particularly the
Conversation Carousel, since she had done some of these strategies or had seen them enacted.
However, teachers' initial struggle to narrow their ELD strategy selection to integrate within
their content instruction was connected with the practicality of the strategy to either fit within

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one lesson or within one unit of study. As Allie expressed:

> *I feel like a lot of these won't work for 9th grade newcomers, that's what I think. There's too much, particularly in one lesson, if we were to do a debate, that's an entire unit.*

However, the design of this activity needed more explicit guidance around having teachers identify the content specific expectations that they wanted their students to orally produce during content instruction. Assisting teachers to better articulate the particular academic language, key content vocabulary, and language expectations for students to orally produce using their selected ELD strategy could have provided teachers the needed clarity on how to best integrate the student talk strategy to explain their respective content with precision. Consequently, teachers would improve their ability to clearly define their language and content objectives, and to relate teacher and student performance with the lesson outcomes. These identified improvements could support the metrics around ELD strategies (P1) and subject matter content (P2) competencies as well as connecting teacher and student actions to the lesson outcomes (P6), where teachers mostly displayed stagnation or no growth from the impact data metrics.

The goal of better understanding teachers' rationale for selecting a student talk strategy and how they approached its implementation to teach their content emerged in the activity, though the way teachers expressed their ideas could have been more pronounced. The exchange between Allie and Ellen demonstrated how instructional conversations among teachers—centered on students' needs—could facilitate new learning opportunities between colleagues that move towards "instructional talk" (Troen & Boles, 2012). It allowed teachers with less expertise in determining and using supports for newcomer ELs in their content areas to learn from colleagues' expertise in implementing specific strategies to promote a language-rich classroom.

Activity 4B: Presenting Teacher and their Unit of Study/Lesson (3 sessions)

Using sample lesson planning templates and other resources (see Appendix C), teachers presented their planned lesson to their team members. They then engaged in an Adapted Tuning and Bridging Protocol (see Appendix C) to help determine how to best integrate the selected ELD strategy promoting student-to-student interaction in their upcoming lesson to teach a particular content. This structured way of considering feedback from colleagues on how to best integrate their selected ELD strategy—Conversation Carousel—to teach the subject matter content for a focal student helped develop a supportive culture of analyzing teacher work. The protocol included a series of questions that the presenting teacher used to talk about their lesson, and time for the team to examine the lesson plan and ask clarifying and probing questions. Team members also identified opportunities for the presenting teacher to meet the goals of the lesson with areas for improvement that considered the presenting teacher's responses to the Tuning and Bridge Protocol questions. The presenting teacher was silent and took notes during this feedback session. This activity aimed to build the teacher's capacity to translate content and language teaching objectives to student level learning objectives through the lens of the selected student. In doing so, teachers would develop their ability to anticipate student thinking about the content and plan thoughtful ways to integrate ELD strategy of student-to-student interaction to increase the potential for student learning.

<u>Observations and Analysis of Pivotal Events</u>

<u>Allie's Lesson Presentation (1 hour)</u>

For this meeting, the Instructional Coach facilitated the entire conversation for Team 1 and I served as the note taker. In Allie's lesson plan, she identified both the content and language objectives, and she had a flow to her lesson that started with a DO NOW, announcements, going over the Do Now, and then the lesson activity. Her objectives were:

Content Objective: Students will be able to analyze media images that promote societal expectations of women and men, and describe their impact on individuals.

Language Objective: Students will be able to have a conversation where they explain their analysis and react to the analysis of another student.

During her lesson presentation, Allie planned for her students to analyze an image using the concepts of humanizing, dehumanizing or objectified through the ELD strategy of conversation carousel. Allie voiced that Marco, the focal student, had the foundational skills to succeed in this particular task. The task primarily focused on students having to orally produce English sentences about the concepts of humanization, dehumanization, and objectification in "real time." Allie mentioned that the conversation carousel strategy was not new for her students, and planned to model what each student partnership was going to do during the lesson activity. She planned on projecting the conversation script on the overhead projector while the students were talking; students also had the conversation script as a paper handout. The content for discussion was based on two documentaries about gender expectations and the portrayal of men and women in society. Using the conversation carousel strategy, a pair of students engaged in a dialogue about the aforementioned concepts of humanization, dehumanization, and objectification. One student started the conversation about their image of a man or a woman from a magazine and his/her analysis of the image using the conversation script. His/her partner then responds back using the academic vocabulary words. She presented it as:

We're nearing the end of my unit on hegemony and dehumanization, part of the unit in Ethnic Studies. We've been looking at a media unit... looking at how media portrays men and women... we've been using over and over again the sentence [frame]... "Society expects women to _____ or Society expects men to _____. And so, we've worked on vocabulary, watched two parts of two documentaries. We have looked at a lot of images, and we've done some reading... all pulling out the ideas on, 'Society expects women to___. Society expects men to___' So far [in this unit], students are with a partner looking through magazines to find an image of a man and an image of a woman and then they are writing with a partner... completing the sentence starters that are on the paper... 'In this image, society expects women/men to be___' then [students] pull a quote from one of the two texts that we read...one about women and one about men; ... then use the more critical vocab words humanizing [and]dehumanizing. Also apply some of the vocabulary without all of the support that they've had so far in terms of writing... because we've come to a point where they should be able to use these words independently so the students come up with the ideas...

So the process... students are going to get in a listening carousel... so person A is going to have to talk about the image in real time... and then person A is going to read their description of their image that they wrote, [and] their analysis of the image... and then, person B is gonna build on that idea by deciding and telling their partner, 'I think this person is humanized or dehumanized...' I didn't want just a listening carousel where they are just reading stuff that they wrote before, because it's really hard to know for this level of newcomers if they actually comprehend the words... I'm hoping that this is going to help them think in real time and speak English in real time... And then they'll switch partners and then rotate... I'm hoping at least 4 or 5 times.

During the lesson discussion, Ellen brought to attention a concern around how the focal student might perceive the directions:

Ellen: *I'm also thinking, you said that on your [PowerPoint] slide you're going to have both the [academic] words that they're supposed to be using and the process. And I feel like it's gonna be confusing... I'm thinking of Marco you know, who is trying to look at that slide and be like, "What am I supposed to do?"... I don't know... I really feel like... If somehow you can attach it on the back of their [papers]... like a dyad script.*

Allie: *Yeah I was thinking of that...*

Ellen: *And that can include sentence frames that is translated into their home language [mostly in Spanish or Chinese] so they know how to use the sentence frames...*

Allie: *Well all the sentence frames they should know... that's the point is that... All this, what I'm asking you [students] to say... are the ones that we've been saying daily for... three to four weeks now... so... I like the idea of a script... I just don't think they [students] need to translate them [sentence frames] anymore.*

Additionally, Ellen raised her concern around the level of difficulty of student language production for students:

During the part of students' analysis, how could students' response to an image go beyond "I see women" or something easier if the goal is for students to actually show a level of analysis?

One suggestion from the team member was to require students to say four different focus academic words as a catalyst for the analysis to happen, going beyond the anticipated simple basic observation statements.

During the feedback section of Allie's lesson presentation, several suggestions were provided and questions were posed for Allie to consider:

- *The lesson may have "too much scaffolding", which might constrain students' dialogue if some can say more than the what the actual sentence frame allows.*
- *Determine strategies for teachers to monitor the conversations of the students, and what they are assessing: content with regard to images that students have analyzed, the students' ability to produce language, or the use of the main academic vocabulary.*

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- *In the lesson, students assess each other about their analysis of the images about their accuracy. This would require students to be able to give feedback to their classmates on whether their response is accurate or not. What does that structure look like?*

Analysis of Allie's Lesson Presentation

It is important to note that Allie's use of the conversation carousel strategy to talk about the concepts of humanization and dehumanization was occurring near the end of her hegemony unit of study. It was being used as a way for students to practice both their English language development and demonstrate their learning about the concepts in the hegemony unit. Allie's approach was not to teach new content learning, but rather more of a focus on language practice to review the learned content. Allie expected her students to independently and orally produce the sentence frame: *"Society expects…"* as well as the key academic vocabulary that they had been using within the unit. In this activity, Allie conceptualized students' demonstration of their content knowledge and language development as students' ability to independently produce in "real time" the learned academic language to talk about an image as it related to the humanization or dehumanization of people within society.

The team discussed possible areas within the lesson where the learning could break down for a student, using Marco as the focal student. This breakdown in student learning centered on the process of the activity, which appeared equally valued by the teacher team relative to the content learning and language development. In addition, the possibility of over-scaffolding for students surfaced because the projected script might inhibit some students to perform extended talk about the content beyond what the conversation script allowed; this could be perceived as antithetical to Allie's goal of providing students more opportunities to talk about the content they learned in the unit. Moreover, Allie's team pressed her to think about how she might monitor students' conversations as well as whether her assessment of students was based on content, language production, or the use of the main content vocabulary in the unit. Lastly, the theme of higher order thinking was raised in the teacher team conversation as *"the level of difficulty of student language production"* that *"actually shows a level of analysis."* This was a recurring motif across the other lesson presentations as well.

Ellen's Lesson Presentation (1 hour)

For this session, Ellen was out for a district-wide PD. Instead, Ms. V, her planning partner, presented her lesson. Since Ellen and Ms. V, both taught the same lessons that they co-planned together, Ellen thought that Ms. V could explain the lesson that they were both planning to teach that week. The Instructional Coach and I modified this session to have both Team 1 and Team 2 to be together as a slightly larger group, partially because Ms. V was presenting her lesson for Team 2 and Ellen was absent. Ms. V presented for both Team 1 and Team 2.

The content that Ms. V and Ellen were teaching was inequalities. Ellen planned to use the conversation carousel in her lesson, meanwhile Ms. V planned on executing the Gallery Walk, which was Team 2's chosen ELD strategy. During the lesson, Ms. V was able to speak about Team 2's focal student, Joyce, however Ms. V could not speak about Team 1's focal student, Marco. Ms. V and Ellen conversed during a follow up conversation what was discussed in this meeting and feedback from this lesson presentation. In this presented lesson, there was a clear language objective and a content objective written. It included a section that started the class

through a DO NOW, which connected with what the students would be doing during the class activity.

> *Content Objective: Students will be able to graph a linear inequality and identify key features of a graphed linear inequality.*

> *Language Objective: Students will be able to describe the key features of a graphed linear inequality using key vocabulary.*

During the presented lesson, Ms. V articulated that each student would receive a graph and independently answer the series of five content related questions about it. Each student would work independently first before working with another student. Students were to be provided with sentence starters on half-sheets of colored papers. The students would have ten minutes to complete the independent portion of the activity. Ms. V described her and Ellen's lesson as:

> *Right now they [students] are learning key features and they're able to write the inequality, but now are "flipping it." And so by the later half of this week, they [students] would have been introduced to graphing already and I feel like this activity would be like maybe the first practice day or the second practice day after they've already been exposed to the content.*

> *In the first part [of the lesson], I've got a DO NOW where students just practice [what they have learned so far]. Each individual student is going to receive a different inequality [problem] and they're going to have a blank graph with some question underneath and… a bunch of sentence frames for talking about [the graph], like the border line... solid or dashed... the shading... and what inequality symbol to use... And they're going to use the concentric circles [conversation carousel] activity to ask and answer those same questions [about the different graphs]. We [Ms. V and Ellen] had the idea of color-coding the questions, instead of numbering them, [also] the idea of categorizing the type of questions. And we want to model it so that students know who they are, student A or student B, and how to talk to each other about their graphs. We started with going from graph to inequality first just so that they're familiar with the key features… then we're going to review those key features again this week about how to actually graph so I'm hoping that at least be familiar with the words—borderline, dashed, and. solid… shaded above and below.*

When prompted to speak about her focal student, Joyce, Ms. V added:

> *I already know she already understands inequalities symbols because we've taught that before… but I think her challenge… at least in my class she shies away from like reading in English and speaking in English so I think that I think these questions will be good for her to think about.*

When probed to anticipate where her focal student would find difficulty:

I think students will flip the inequalities it's like they'll get confused between understanding greater than and then a symbol for greater than and equal to… I think also… because we're teaching them in a specific format where y>mx+b or y<mx+b. The y = mx+b, equation, they're used to that. But then I think they get confused if like, mx+b>y, where the y and the mx+b switch places like that's a source of confusion for them.

The list of questions on the half-sheet of colored paper all began with, *"What is…?"* Two questions were framed as "OR" questions, which afforded students a fifty percent likelihood of getting the correct answer. The construction of these "closed ended" questions, did not appear rigorous enough to actually generate a rich conversation. As seen in this excerpt from the meeting:

Allie: *"I'm wondering, I know that the conversation is suppose to be about whether they agree or disagree… that it's correct. I'm wondering how meaningfully they will be engaged to that. When I did the "agree or disagree," they [students] were just like... " I agree." That wasn't the part where they were doing a lot of thinking unfortunately. I think it's still a good prompt and I think too they [students] shouldn't just blindly agree to things in general. But figuring out somehow... I don't know what to do about that… or maybe that's not your main goal in this carousel and then it's not such a big deal.*
Jade: *"I think they struggle because there were sort of clear answers. You know it wasn't like a topic where there was really something that they would have different opinions [about]. So for this, I'm also wondering… is there just a correct and not correct?"*
Ms. V: *"Yeah."*

Related to the concern around questions being open-ended or closed ended as a barrier for fruitful discussion for students, Allie added:

"I think that I'm concerned that trying to push it [the question] to be too open-ended its gonna discourage them [students] further... because they don't have the language... like I'm thinking about Joyce (Team 2's focal student who Allie taught as well) in particular. Like she doesn't have the language to justify her thoughts in English right now... I don't think."

Analysis of Ellen's Lesson Presentation

In this meeting, Ellen and Ms. V's presented lesson occurred somewhere in the middle of the inequality unit that was being taught. The main vocabulary words were already taught, and this current unit of study was building upon the prior equality unit of study. Ms. V and Ellen's approach to this lesson was for students to use the main vocabulary words and provided sentence frames and apply it to their individual inequality graph problems. Afterwards, they would use the same vocabulary and sentence frames for pairs to utilize during their conversation about each of their inequality graphs. Additionally, as partners discussed their inequality graphs, they were tasked to either agree or disagree to what their partner presented about their graph. This was when the team grappled over whether having students "agree or disagree" would elevate the

student discussion since there was either a right or wrong answer to the question. As Jade mentioned, *"There were sort of clear answers… it wasn't like a topic where there was really something that [students] would have different opinions about…"* Allie however, raised the appropriateness of providing "too open-ended" questions for newcomer students since newcomer students often would not have enough command of the English language to further justify their reasoning.

The tension between providing newcomer students opportunities within tasks to "agree or disagree" and justify their ideas compared to having newcomer students identify and describe features of an inequality graph was connected to the recurring theme around task design and higher order thinking. Moreover, Allie's concern around questions being "too open-ended" pointed to how the language objective would be the critical articulation to anchor the lesson. The language objective served as the explicit and intentional language development learning that students were supposed to learn and demonstrate during the lesson in understanding the concept of inequalities. This lesson's language objective asked students to "describe key features" using "key vocabulary," not necessarily to "justify" their reasoning for agreeing or disagreeing with their partner. This was reflected in Allie's comment, *"maybe that's not your main goal in this carousel and then it's not such a big deal."*

This raised the second tension around whether questions that promoted higher order thinking should 1) always be present in a lesson for all students, 2) serve as a way to differentiate within the lesson. In this lesson for example, the language objective was for students to "describe" inequality graphs using "key vocabulary," therefore including a layer within the lesson activity for students to "justify" their agreement or disagreement with their partner about the inequality graph was not necessarily the intended goal but could be included in the lesson to differentiate for students who might have enough language to "justify" their reasoning in English. And if justifying their reasoning was expected for newcomer students in this activity, then the language of justifying must be explicitly taught to students in the lesson in order for them to actually perform the task. In this case, it was not the goal, therefore that language function was not provided for students. Thus, the expectation of having students justify their ideas during this activity seemed like an addition to the intended goal of the lesson..

Jade's Lesson Presentation (1 hour)

In this session, Ellen was out for another district-wide PD. Since they were missing another team member, both Jade and Allie wanted to modify the Adapted Tuning and Bridging protocol. In Jade's lesson plan, she indicated:

Students are comparing and contrasting cultural etiquette and will read the short story, "The All-American Slurp."

Students will explain behaviors and determine whether it is polite or impolite in their home cultures, then compare and contrast the responses.

In her lesson plan, Jade did not differentiate between the content and language objective, although both statements were listed in her objectives. She was using this particular lesson as a way to activate prior knowledge and to build schema for students. She described how students have done some vocabulary study around words such as etiquette, behavior, and culture. For this activity, students were individually assigned one behavior among a list of twenty five behaviors,

and that the goal was for each student to first understand the behavior, and then be ready to explain or act it out in some way to a partner. Afterwards, students needed to decide if their assigned behavior was polite, neutral, or impolite in their home countries. Using the conversation carousel, students were expected to act out their assigned behavior and explain it to their partner. Their partner would then need to think on the spot about whether the presented behavior was polite, neutral, or impolite in their own home country and then jotted it down in their graphic organizer. They repeated this process with four other students through the duration of the conversation carousel activity. After engaging in the conversation carousel, students were then to determine which countries, based on their collected information, had the same and different manners as their own home country.

Jade's lesson presentation included her talking to Allie and me about her lesson from start to finish. The instructional coach was taking notes. Jade included sentence frames near the end of the activity where students performed a gallery walk that had students use the sentence frame: *"I think manners are... in... because..."* based on the conversation carousel activity. In the initial activity guide Jade presented, students were assigned one statement about a specific mannerism, such as *"chewing with your mouth open."* Students would then translate this mannerism from English to their L1 and used the provided sentence frames to engage in a dialogue with their partner using the conversation carousel to discuss polite or impolite mannerisms. In her revision of the activity guide after the lesson, Jade included a section where students provided an illustration as another mode of presenting their ideas, thus including another visual strategy for students. In articulating one her concerns regarding the focal student, Jade explained:

> *"So what I'm worried about with Marco is the comprehension … some of these [listed behaviors] are not that easy to act out... so I just wanna make sure he understands what the behavior is so that he can respond if it's polite or not…"*

Analysis of Jade's Lesson Presentation

In this meeting, Jade's presented lesson was to occur in the beginning of a new unit to build students' schema around cross-cultural mannerisms in preparation for reading a short story, *The All American Slurp.* Connected with the other two lesson-presentations, there were salient themes in Jade's lesson that were worth highlighting. The first theme was around the structure of the lesson itself. In of all the three lesson plans, an articulation of the objectives (both content and language) was present. This spoke to the past training teachers had in developing both content and language objectives, though there seemed to be a range in the quality of the written objectives. Moreover, there was a common flow of the lessons across all three classes, where students were provided the lesson objectives, engaged in a form of DO NOW and then enacted an activity. Though, Jade's objectives were heavily more content oriented compared to Allie and Ellen's lesson presentations. Nonetheless, this sequence of events for each class was apparent. In all three presentations, discussions around the details of the activity were clarified and probed, and areas where students could potentially get confused or have misconceptions were raised; often the focal student was cited as the example. This led to the second theme that centered on the actual implementation of teaching the content and the sequential details of how the parts of the lesson occurred.

The placement of the lesson within their unit of study varied from each presented lesson. Allie's lesson was in the end of the unit, Ellen's lesson was somewhere in the middle of the unit,

whereas Jade's lesson was starting a unit of instruction. Jade's lesson placement in the beginning of the unit was used as an entry point to the text that students were about to read. Jade's lesson differed from the other two lessons in that the content discussed did not stem from students' recall and understanding of content that was already taught, but rather it was centered on students' prior experience from their home country and their understanding of their own cultural mannerisms. This appeared to be a more open-ended task in that the content that students were to discuss generated from students' individual and collective understanding around the idea of cultural mannerisms. In addition, there were points during the feedback where considerations or suggestions for modifying specific points within the lesson were provided, especially around how students were to talk about the content during the activity. The use of sentence frames were discussed, as well as the language function that students were expected to perform relative to the language objective of the lesson. This appeared specifically during the team discussion where teachers were providing an additional step, deleting a step, or revising the step in the lesson on how students were going to discuss the content. This begged the question as to whether "adding/revising/deleting steps" or "adding more ways to hold students accountable" created more confusion for students and further complicated the process for students to productively use language to talk about the content.

The final theme concerned the tension between pushing students to engage in higher order thinking versus providing appropriate depth of knowledge levels for students that balanced both language and content. This manifested in the intervention activities as teachers considered ways to include higher order thinking skills, such as asking students to synthesize, analyze and provide detailed explanations; yet teachers hesitated on pushing students to extend their responses through their prompts/questions/tasks to include extended explanations due to concerns over their English proficiency level. The argument was that, *"The time it takes for students to think through the task, to get them to speak and use the language to do that and then have them answer a 'why' question"* was a tall order for some students. This echoed the issue between higher order thinking and differentiation, regarding newcomer students, elevated in the impact data section. The knowledge base around the challenges of teachers of English learners stated that teachers struggled with this issue since teachers are wanting to see some semblance of success for students (Gersten, 1999); they are not wanting students to be discouraged (Hatch, 1992); they are getting them to do the task in a timely manner (Verplaetse, 1999), considering that speaking exercises take time for newcomer students.

In terms of meeting the goals of the activity, the three lesson presentation activities did very little to build teachers' capacity to translate teaching objectives to student learning objectives. Though the adjusted tuning and bridging protocol explicitly asked teachers to articulate their crafted objectives to student level learning objectives, teachers struggled with this skill. They needed more explicit guidance on this skill. It seemed that participants' approach towards crafting lesson objectives was a way for them to state what they expected students to do, instead of a way for students to know what they needed to do. Connected to this was teachers' struggle with their task design. Designing tasks was not a skill-building component included in the intervention activities. This became apparent when teachers were challenged with how to appropriately include higher order thinking skills in their content respective tasks. On the other hand, the lesson presentation discussions were often anchored on the focal student that included the focal student's anticipated student thinking about the content. This allowed teachers to discuss thoughtful ways to integrate the conversation carousel strategy to increase the potential for the focal student's learning. Additionally, the teachers' focus on "the process" was striking,

where teachers dissected the steps as to how students might be able to effectively talk about the content. This connected with the literature around the process and product dichotomy in language and content integration; teachers often highlighted the importance of the process for students to demonstrate higher order thinking skills, yet students were engaged in tasks that did not promote such skills (Gersten, 1999).

Activity 5: Classroom (Video) Observation (3 sessions)

Instead of visiting each other's classroom, teachers elected to be video taped and then watched the video of their classroom instruction and of the focal student. The video for each presenting teacher was captured using two cameras, one focused on the teacher and the other on the focal student. This juxtaposition of the teacher and student on video aided with how teachers engaged with the video observation tool. In addition, teachers were tasked with using low inference observations of how the teacher used the conversation carousel to teach their subject matter content and how the focal student used the ELD strategy to understand the content being taught in the class. This activity supported teachers to apply their understanding of how subject matter knowledge could be integrated with an ELD interactive strategy for a focal student so that the student could further develop their language production skills.

Observations of Pivotal Events

I was able to capture both, Allie and Ellen's classes on video. The videos were in split screen, where one camera focused on the teacher and the other on the focal student. There were some issues with the microphone as it was sometimes difficult to hear what the student was able to say during the activities. Due to scheduling issues and unforeseen events, Jade had to move her scheduled lesson implementation on a different day so she was not captured on a split screen video format. Instead, she was able to videotape the focal student during her class while engaged in the conversation carousel.

In each of the video observation activities, the video observation guides were provided. In one of the observation sessions, the teachers filled out the video observation guide:

TABLE 4.33: VIDEO OBSERVATION GUIDES

	Allie	Ellen	Jade
Low Inference Teacher Moves	Saying a different sentence in English to give a clue for the do now Demo and have the directions translated Naming students so they know their letter Pushing students to use a word that is correct	"What do you have here? What do you need?" Positive affirmation Both are correct as long as it comes before the word Repeating "eyes on me, phones away, one voice" in the countdown Reading agenda 3 corrections - reviewing each Always need two quotation marks Timer for paper collection Example of partner a and partner B	Asking and guiding students to correct their sentences Calling out reminders Attention getter Reading objectives and agenda Words for the week repeat Reviewing Do Now answers Explaining instructions Explaining assessment expectations Helping students get in circle formation with partners Positive reinforcement After carousel, reviewing overall themes Giving tickets for word spoken
Low Inference Student Cues	Putting names on papers that they need for the conversation Following the teacher to	Volunteering to collect papers Watching teacher during instructions/example. Students translating directions	Students correcting sentences for DO Now work Students listening Singing quote

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	understand directions Picking up script page	after example Looking at speaking diagram to figure out the process.	Students calling out translations Student has headphones in but takes it out because teacher asks Organizing notebooks and pulling out papers Students listening and engaged 2 students model out Students translating instructions in each language Students following script Marco struggling with script - looks confused but says the sentence!!! Students writing reflection/exit ticket about overall themes, agree/disagree Marco working on assignment after bell rings and Javier came to help him
High Inferences	2 circles was really new for them Marco needs MUCH more time than other students		Students familiar with routines High expectations for listening and behavior
Wonderings	Next time - have them follow on the script page with their finger Next time - put Marco with a more helpful person for first round I hope next time i do this it will be easier I wonder if I tape on the floor the circles would be easier		How to make the conversation more authentic that is appropriate for their level? How to really assess students with so many conversations happening? How to make sure students are listening? "I heard you say?"

Analysis of Activity 5

After Allie completed her inquiry cycle, teachers seemed to have adapted their approach to the cycle of inquiry during the video observation activity. For this team, their adherence to write their observations on the video observation guide shifted slightly where they watched the video together as a team and paused the video on certain parts to discuss about what they were noticing. Their conversations remained spirited and engaging. There was a certain level of comfort among team members who were willing to break from protocols and adjusted it for their team; this could be due to the history of these three teachers having worked with each other for the past two years in the same team.

Perhaps the most ostensive finding from all three video observation activities was seeing the way each teacher taught their respective content while enacting the conversation carousel in their lessons. In Allie's lesson, she included a visual sequence of sentence frames that was in a specific order on the overhead projector. Students were to use this script to discuss their images around the portrayal of men and women in media. The rigid script displayed which partner started the conversation and how the partner would respond to the image and vice versa. Allie was standing in the middle of the room listening to students' conversations and provided tickets when she heard students say one of the main vocabulary words. In the video, most students seemed to have followed the directions for the conversation carousel activity, after the teacher modeled the process with another student in front of the class. However, Allie noted on her video observation guide that, *"2 circles was really new for them"* that seemed to contradict her

statement from her previous lesson presentation where she stated, *"The process of conversation carousel is not new for my students… since students have done this before in my class; The strategy is familiar to students."* This contradiction surfaced how Allie overestimated how her students acquired and applied the conversational carousel as a way of talking about the content; the conversation carousel had not been a repeated, intentional routine within her content instruction. As she noted in her follow up interview, this was something she was working towards.

In Ellen's lesson, she approached the conversation carousel to talk about graphing inequalities through the use of colored papers with questions. In the video, students had independently solved their own inequality problems during the DO NOW on either green or purple paper. During the conversation carousel activity, students were then required to ask the questions about their inequality graphs on their paper to another student, in no particular order. In the middle of the circle, Ellen stood atop of a chair, in order to better hear the conversations and to provide directions for the activity. She was noting what students were saying during their conversation. Unlike Allie, Ellen did not have rigid script that students used during the activity. Instead, she had the questions on the back of their graphs on two sets of colored paper. She gave directions to students based on the color of their paper. This less rigid structure seemed to draw a more authentic conversation among students to talk about the inequality graphs with their partner. The student in a pair was able to select which question about the inequality graph that he or she wanted to discuss first, whether it was about the starting point, slope, shading or line. However, students' extended responses during their pair conversation was often limited to, "Yes, I agree or No, I disagree," without pushing for explanation.

Lastly, Jade's approach designated students as either an even number or an odd number in the conversation carousel activity. This allowed her to give directions to even numbers to move in a certain direction while another set of directions for odd numbers. In addition, there was a specific order in which students had to speak with their partner during the conversation carousel, and it required them to also listen and take notes as they interacted with another student. The specific order of questions that students had to ask their partners about cultural mannerisms required them to use the key academic terms of polite, impolite or neutral as it connected to their home country. Jade also included a bank of words and adjectives that students could use for their extended response to elaborate on their ideas.

In terms of meeting the goal of this activity, teachers were able to apply the conversation carousel within their lesson to promote student-to-student interaction to teach their respective content. What the video observations revealed was the level of how teachers either implicitly or explicitly taught the language that the students needed to use during the conversation carousel to discuss their respective content. Teachers' explicit teaching of the required questions and language used to respond to the questions allowed students the entry point and to develop their confidence in producing the language to talk about the content over the duration of the lesson. It also showed how a least explicit, more implied approach, prevented students from producing a response. When students were asked to provide an explanation, by completing the sentence frame after the word *because*, some students struggled with producing the language since there was less explicit language provided that students could use in order to fully articulate their ideas. In contrast, when teachers expected newcomer students to produce extended responses to explain their understanding of the content, the use of their primary language (L1) was not encouraged to allow students to demonstrate their content understanding as a more developmentally appropriate method. This connected to the question from Allie's lesson presentation activity, when Ellen and

Jade raised what Allie was intending to assess*:* the content that students analyzed, the students' ability to produce language or the use of the main academic vocabulary or target words*.* In addition, we cannot overlook that the expectations for newcomer students to produce extended responses to articulate their content understanding relied heavily upon the appropriate level of the students' current language status. Teachers' ability to scaffold students' production of extended responses in their lesson surfaced as a skill that was not addressed in this design; supporting students' extended response production was related to task design.

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PHASE III: EVALUATION PHASE

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Activity 6: Lesson Debrief (3 sessions)

In this activity, teachers were using protocols to guide conversations around classroom observations and student work. Teacher teams first engaged in a discussion on what they saw on the video, specifically on how the ELD strategy was utilized to teach the content and how the focal student responded to it. After analyzing the video, teachers then analyzed the focal student's work to surface gaps and areas of improvement as it related to how the student acquired the content and produced language through the ELD strategy. The main objective of this activity was to develop teachers' capacity to look for evidence in the student work about student's language development and content understanding. Additionally, teachers were to learn from their colleagues about how they think through and reflect on their lesson enactment.

Observations of Pivotal Events

For each of the lesson debriefs, Allie, Ellen and Jade provided Marco's resulting work from the lesson captured on video. In this session, teachers looked at Marco's work and answered questions using the graphic organizer. These same questions would be used during the lesson debrief conversation. In one of the lesson debriefs their notes included:

TABLE 4.34: STUDENT WORK ORGANIZER

	Notes
What should have the student been able to do based on the given task? *What aspects of the learning objectives did the student meet?* *What do the teacher's expectations require students to know and be able to do?*	He used 3 vocabulary words Produce vocabulary words in reaction to pictures Student present his pictures, respond to partner's pic and say agree/disagree Student says opinion and reason using language learned in unit
What does the work reveal about what the students actually performed? *Where in the work do you find gaps?* *Where in the work do you see insights into student thinking? How about language development?*	Struggled with the directions in the beginning but understand the vocabulary in lesson. Translation of words Didn't have the picture at first but was able to write a response. Student is using vocabulary learned in class only did the first sentence because he didn't see the images of a man in picture; On his paper, he wrote "a picture in the computer"
Teacher moves during the lesson *What types of moves did the teacher enact during the lesson that can help explain the student work?*	Translating the prompt for words that were not the regular vocabulary words; listening for key words Examples and modeling Visual scaffold on board
Student cues contributing to the student	Was able to say 3 words to describe a picture. Was able to answer 1 question

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work	on exit ticket
What types of student cues/actions occurred during the lesson that can help explain what contributed to the resulting student work	He answered one of the questions and he was last on his table to finish his paper
	Wrote one sentence with the help of another student and not the help of the phone

For each of the debriefs, there were specific observations worth noting:

<u>Allie Lesson Debrief</u>

Allie reflected on improvements around the process, particularly on the demonstration of the directions and how to provide better, clearer directions. She articulated her disappointment since students' performance did not meeting her expectations. She expected better analysis from her students. She ruminated over how she could have stressed the directions more as far as frontloading the actual meaning of the vocabulary word and for not defining it clearer. Allie surfaced the challenges of wanting to repeat the process of conversation carousel because she wanted to do it sooner than later, however, she asserted *that the hard part of it is implementing it within a good amount of time that fits into what is being taught [the content] in the next lesson."*

In the lesson debrief, Ellen described her struggle to connect what she saw in the video with the indicators that teachers developed for content knowledge and language development. She was challenged to explicitly make connections between the language and content indicators with what was displayed in the video and from the resulting student work. Ellen described it as:

> *I feel like I can pick out a lot of these, but I feel like where I am struggling is how to connect them. I don't know if this is recall of information, but a lot of the vocabulary words were being used… so like the Humanized, dehumanized, objectified. You heard that from every kid and I realize that was part of process but still, hearing it from every kid is not necessarily a given.*

In addition, Ellen raised the challenge of differentiation again in terms of how students moved through the process faster than others, and how to address that in a lesson. Ellen seemed to suggest that two criteria could possibly explain how students moved faster than others during the activities: Students understand what they were supposed to be doing (referring to the process) and/or students have either a deeper content understanding or higher language proficiency.

Marco was capable of doing the work once he understood what he was supposed to do. Ellen added how Marco became flustered when he did not know what he was supposed to do in an activity. Allie also described how Marco moved slower as a result of this and it made it harder for him to engage. Thus, Marco needed processing time, as Allie suggested. Allie even considered that Marco might also had second-guessed himself; *"Often Marco tried to process everything, which made it more difficult for him."* However, Jade argued that, *"sometimes I find those dialogue structures very confusing so I never use them... but I'm wondering... if the students could follow it."*

In terms of supports for Marco, teachers discussed how being intentional about making sure who he was paired with might help. In addition, perhaps the use of their fingers to read along when following directions might also be another way for support. As far as Marco's successes, Ellen provided an example of how Marco becomes self-regulated once he understood the process. She described how Marco was really successful at performing specific routines such

as the DO NOWs because he knew what was expected of him. Ellen expressed, *"He's really successful at his DO NOWs because he's got it. He knows how to take it [the DO NOW Sheet] out [of his binder]... and then.. he's gotta do it."* To that point, Allie added that Marco was getting much better in his listening skills and developed his own strategies when he does not understand something during class.

<u>Ellen's Lesson Debrief</u>

During this conversation, much of the focus was on how to improve the process in order to consider ways to assess content understanding. The suggestions were mostly around modifications to the current structure in order to make the work manageable for the teacher in assessing content understanding. Ellen described this as:

"I don't really know how I would change that in terms of assessing content knowledge... I think it was more the idea that they're [students are] talking about it [the inequality graphs] and... I can assess content knowledge in other ways..."

Here, Ellen spoke about the difficulty to integrate language and content because *"the content is difficult to begin with..,"* citing as an example that, *"the concept of slope as something students probably have never learned in Spanish... a total unfamiliar concept.. so trying to translate it for them is not useful..."* Rather, she described the idea of slope in the primary language (L1) of the students instead of translating it as a word. She asserted that the struggle was that since the instruction was in English, or the academic vocabulary was in English, the mere translation of a word to their primary language (L1) did not suffice to create a deeper understanding for students in her class who were predominantly Spanish speakers. Allie supported this argument around the use of students' primary language as:

It's great that we ask students to leverage their L1 whenever they can... but sometimes... [Students think] that's always what they're suppose to do. So when they're given a word like slope or segregation that they don't know in Spanish, and they translate it, and they go "oh, I don't get it."

Ellen reflected on how she could better incorporate speaking exercises for students in her lesson planning process. She seemed to struggle with how to make this happen in her class regularly. She asked, *"How do I integrate speaking more seamlessly in my planning process?"* She was particularly concerned for her newcomer students whose language skills, for a majority, were very low. She described it as: *"In order to do it in the class (speaking activities)… it needs more scaffolding… thus it is more exhausting."* The amount of supports and scaffolds needed to make students, particularly for newcomer students with limited or interrupted formal education, engaged in speaking academic language in class seemed overwhelming for her even though she was seeking for repeatable structures that she could use.

On the other hand, Jade surfaced her challenge regarding the concept of language and content integration for herself as an ELD (literacy) teacher. She felt like they were one and the same for her class(in terms of the content and the language development). She articulated this as:

Jade: In terms of language and content I still feel like… it seems like the same thing.

Allie: What do you mean like the same thing?

Jade: I mean I'm not doing any like complex literature. You know I feel like my class, I still don't quite know how the content is so different than like...

Ellen: from like ELD?

Jade: Yeah. I mean I'm doing more reading, more writing. I still don't get.... something in particular that I'm suppose to be teaching like content wise.

When probed by her team to say more about this specific challenge, Jade admitted to struggling with what the actual content was for her class, which was why she did not necessarily share the same challenges as her other colleagues in terms of integrating language and content.

Finally, Allie argued that the whole point of the listening carousel in the lesson to teach the content was *"knowing when to use which words and not just saying words."* She added that:

Knowing when to use those words in a lot of ways... I wish they [students] could sometimes think about it that way... They [students] don't need to know the word in both English and Spanish... you [students] just need to know the word and when to use the word... right?

Jade Lesson Debrief

Jade's lesson debrief transitioned from looking at the video of Marco's class performance enacting the conversation carousel activity in Jade's class into looking at Marco's resulting work from the activity. The lesson debrief discussion followed both events. During this discussion, there were moments of clarity in connecting what teachers observed from the video to the resulting student work. This led to teachers surfacing where the learning broke down for Marco during the instruction:

Ellen: I feel like you were trying to have [students] not like think on the spot, instead of them writing, "My statement is... " and then reading this whole thing which is really... I don't know. There's a disconnect between like here (points to activity guide) and then going back to look at (refers to back of the activity guide sheet)... I feel like Marco needs to look at this side at the same time as he is saying these things [sentence frames in the back of the activity guide] but I don't know how to do that and also let his partners see that.

Jade: I can have him write it again in the back. There's more space there.

Ellen: Marco needs to look at what he is trying to do. I notice in my class too he would turn his paper over so he could like double check [his work] even though he has the answers already; but he would still look at it. I don't know how to fix that.

Allie: Is that about confidence? Is that about like he needs that step or he doesn't remember or understand? I don't know. The paper flipping is tricky for him in my class too.

Facilitator: Or are there too many processes going on for him at the same time?

Ellen: Yeah, like how do you reduce that?

Allie: Yeah, its like his working memory is not very strong. Like he can't hold something...

Jade: I think, he is also a visual learner too... he needs the image...

Allie and Ellen: yeah.... (strongly agrees).

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> Allie: I don't know if there's something... like the word metacognition keeps popping into my head. I feel like he's got some because he always wants to tell you his thinking process...

The excerpt above illustrated how as a team, teachers were understanding how Marco was learning, and what considerations in terms of instructional support would be required in order to better help him learn both the content and the language to talk about the content. In addition, Allie referenced the concept of *"metacognition"* that perhaps Marco was struggling with in terms of how he was negotiating the "process of his own learning" and the actual "process of learning that his teachers wanted him to engage with" during instruction.

In another exchange during this session, the teacher team considered the progress Marco had made in their classes:

> Jade: I think he understands that (impolite.. neutral.. polite). I think the hardest part of him was understanding what the other person was telling him and to think about whether it's polite, impolite or neutral and also just sharing his own work. But he understand these words.
>
> Allie: Yeah. Abstract concepts isn't that hard for him, but concrete directions are very hard for him...
>
> Jade: That's so true...
>
> Allie: Yeah, because he can recall humanization, dehumanization, the best out of them (students), but then when to talk is like. It really is like his long-term memory... I don't know. I mean he's working really hard to produce English. I think he is progressing.
>
> Ellen: And I think compared to two months ago, he is completing a lot more work in class. Like he doesn't have to take everything home and do it later.
>
> Jade: The content too he really understands. He gets it and he's doing so much better with writing too. I think, writing sentences at least in my SIFE class (foundational literacy class) we were doing comparative structure and he got one hundred percent on his quiz. Its an open note quiz and a lot of the kids had no clue.
>
> Ellen: He's figured out how to use notes.
>
> Jade: And he knows the content. He really got it. He transfers the Spanish a lot more than other students do.
>
> Ellen and Allie: Hmm. (nods in agreement)
>
> Ellen: To understand?
>
> Jade: Yeah, to help him understand the content.

During this exchange, the teachers believed that within the span of four months, Marco's performance in class had improved considerably. Teachers articulated that *"he understands"* and *"gets it,"* referring to the content in their classes, citing Marco's understanding of the abstract concepts in their classes as well as his improved writing skills. Jade even mentioned that Marco had figured out how to use notes—a practice that was employed consistently in all three classes. In addition, Jade asserted Marco's ability to transfer his L1 and applied it to his L2 contributed to Marco's increased performance, more so than other students in the class.

Analysis of Activity 6

In all three lesson debriefs, four themes emerged around: 1) the importance of being intentional and explicit in identifying the language demands to teach during the planning process; 2) the appropriateness of using students' home language during instruction; 3) the challenge of differentiation with varied language proficiencies and 4) promoting a focus on academic discourse as an instructional practice over time.

Ellen's question—*How do I integrate speaking more seamlessly in my planning process?*—exemplified the need for purposeful incorporation of language skills when planning content instruction. Integrating speaking exercises in lessons, to be effective, required teachers to identify language demands in their content area and being explicit about teaching it during content instruction. Intentionally teaching a language skill that students would use to talk about the content in the lesson was imperative. In Ellen's case, she needed to explicitly identify the various challenges that newcomer students would encounter around a mathematics text or problem. In addition, being able to articulate the arc of instruction and scaffolds over time was necessary to ensure students developmentally acquired the academic language to better understand the content.

Much of how the teacher team had conceptualized language and content integration during their discussions was about lowering the linguistic load for students through strategies such as frontloading of the academic vocabulary and sentence frames. In the teacher team's discussion, they questioned the appropriateness of when to leverage a student's home language without enabling students' reliance on translation as a vehicle for content understanding. Though the use of L1 as a scaffold supported good instructional practice, the challenge that surfaced for teachers was how to provide the appropriate amount and level of home language support because, as Allie mentioned, "*we ask students to leverage their L1 whenever they can... but sometimes [Students think] that's always what they're suppose to do.*" If the use of L1 was meant to reduce the linguistic barriers to promote content learning, then teachers confronted the predicament of not affording students the opportunities to develop more English language.

Teachers expressed frustration around the challenge of differentiation for the range of students' language proficiency in a class, often placing the onus of the issue on the student, "*his working memory is not very strong,*" instead of interrogating their own practice. This tension might stem from teachers' inexperience with working with very low literate students (low L1 and low L2) who did not have a foundational threshold level; it seemed unrealistic to expect content area teachers to provide foundational literacy skills when they had not been properly trained to do so. However, expecting content area teachers to teach language in content-integrated ways served to support students' language development, while ensuring extra foundational skills support was provided outside of the content specific classes.

Lastly, the provision of sentence frames and talk exercises in one lesson did not transfer to independent use of the language during conversations about the content if students had not been expected and taught how to engage in academic discourse. Allie noted, that "*[students] just need to know the word and when to use the word.*" The skill of "*when to use the word*" was the type of explicit instruction through modeling that was needed during content instruction in order for students to develop habits of engaging in academic, discipline specific discourse over time. In addition, the tasks that students were asked to perform should be designed in such a way that supported higher levels of academic discourse; this connected back to task design and issues around higher order thinking.

Recall that the main objective of this activity was to develop teachers' capacity to look

for evidence in student work of a student's content understanding and language development, and for teachers to learn from their colleagues on how they think through and reflect on their lesson enactment. The series of lesson debriefs afforded teachers multiple opportunities to anchor their conversations around a focal student. In doing so, their assumptions around where the student was confused during instruction were either verified or disconfirmed over time. All three teachers honed in on Marco's specific behaviors around the way he reacted to situations that affected his learning: when he did not understand the directions, when he needed clarity about a concept in class, or whether his ability to produce language connected with his own confidence over time. Consequently, a shared learning that happened over the span of the lesson debriefs was a better understanding of Marco's English acquisition. Over the lesson debrief sessions, the teachers were uncertain as to whether Marco needed more processing time or if it was an issue of confidence. Teachers even considered whether it was his *"working memory"* or *"metacognition"* that was contributing to his challenge. However, in Jade's lesson debrief, teachers described Marco as a visual learner and commented on his ability to transfer his primary language (L1) of Spanish, to English (L2). This language acquisition concept raised by Jade brings some of her expertise in second language learning to the rest of the team members who may not be familiar with second language acquisition theory. Such knowledge sharing was critical in clarifying possible misconceptions or assumptions about student language learning.

Activity 7: Process Debrief (3 sessions)

For this activity, teachers engaged in a process debrief using the Change In Practice Protocol, where teachers articulated the challenges and successes of the inquiry cycle process and how to improve it moving forward. Moreover, the main goal of this activity was to 1) help teachers connect a focal student outcome to the process of intentionally integrating ELD strategy with subject matter content, and 2) support in increasing teachers' confidence in trying to integrate language development in teaching their content.

Observations of Pivotal Events

TABLE 4.35: PROCESS DEBRIEF ORGANIZERS

	Allie	Ellen	Jade
Cycle 1	I tried a listening carousel to give students the opportunity to practice spontaneous speech with the vocabulary we had been studying. I was able to find a way to hold students accountable during the activity by tracking their vocabulary in the middle of the circle, an idea I received during critical friends. I also got some valuable feedback after the lesson about giving directions and making sure all students are clear on the directions. This is something I will do differently in the future. This was based on the video of Marco who was trying to pay attention but did not have the paper in front of him and then was very confused at the beginning of the activity. I want to do this more and I am wondering how I can make this a regular activity that students actually look	I have used a listening carousel in order to get students accustomed to the process, so that during the activity, language and content knowledge can be assessed more accurately. We have actively been trying to incorporate more language frames into the tasks that students are doing but I feel like they try more to figure out what to circle rather than understand the language frame. For example , we used a frame for writing one variable inequalities from number lines that said, "the circle is [open / closed] which means that the starting number [is / is not] included. By my example they figured out that open goes with is not and closed goes with is, but I	*had to leave early from the meeting to teach a class next period.

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	forward to. I am also excited for next time I do this when I tell students that they need to keep talking for a full 2 minutes - even if they finish the conversation prompts early.	feel like there is absolutely no understanding of inclusion. Also, ½ the students skip the language frames and I'm wondering what I can do to make the frames more valued in a math class rather than just the production of the work.	
Cycle 2	I want to do color coding when I do the listening carousel. I will do it next time. I still want to try during the activity where they have to talk for the whole 2 minutes if they finish early. Maybe they can have some other questions to ask each other - like small talk questions? I want to do something about getting kids to understand definitions beyond translations and images. I hope Jade and I can work on this together. Marco just needs so much time. And he's missing class. How can we get him caught up? Use colors to scaffold, differentiate, and make pairs more equitable.	Using colors to scaffold to make student pairs more equitable I want to do more intentional language production in class -- how can I think about integrating it into my lesson planning? More practice recognizing spaces where language integration will feel seamless.	I can see Marco learning the strategy and feeling more comfortable participating in partner conversations. His confidence in speaking English is also growing exponentially. I'm wondering how we can make sure that he has sufficient time to understand and participate authentically. I like the idea of having students do more complex thinking in real time. I also think differentiating the work and being more purposeful with the pairs.
Cycle 3	I now think about ways to incorporate language productions. Every few weeks, I think, "How can I use the listening carousel to get them talking?" and the students are getting used to the process. I will definitely color code my worksheets next time to make sure it is easier for students to understand where they should stand and when they should be speaking. I am still thinking about the best way to use this. Ellen was really successful when she did it more call and response, but I can think of many more instances where a back-and-forth conversation is more appropriate for my content - and social sciences in general. I need to be more intentional about their pairs when they first start so Marco can work with someone who will coach him through the first time.	I liked the idea of us all choosing a strategy to try because it helps to get the kinks out in terms of implementation and we know that especially with newcomers, the more repetition of the same strategy, the more likely that it will be successful and more about content and less about process. In terms of the set up, color coding papers for the circles was the most successful.	I'm thinking that Marco needs a little more time seeing a model and practicing before he participates in the carousel. Also, I need to be more purposeful with whom he partners with, at least for the first time. Specifically, a more advanced Spanish speaker that can help guide him through the process and explain. I think it's important to also stress (at least for my activity) to focus more on explaining and acting rather than using Spanish as a default. I also want to delve more into thinking in real-time but with something more complex that requires critical thinking.

Analysis of Activity 7

In examining the process debriefs of each teacher over time, there was consistency as to how teachers wanted to hold students accountable to produce language in order to gauge their content understanding and language development through the conversation carousel. The teachers focused on: 1) the process of implementing the strategy to teach their content, 2) how they might improve upon it in the future, 3) consistency in its usage, and 4) ways for students to demonstrate higher order thinking.

Ellen cited her desire to improve how she could be more intentional in including more

language production in teaching her content but she struggled with the question around how she could better integrate this into her lesson planning. Ellen continued to struggle with being able to include more language production for students that would fit into her teaching of the content; she described it as, needing to have *"more practice recognizing spaces where language integration will feel seamless"* in her lessons. Considering her predilection to teaching content over being more purposeful with language development to teach the content, as evidenced from the impact data interviews, it was not surprising that Ellen's skill in this area still needed further development since this intervention design did not focus enough on explicit skill building around ways to consider language production in designing academic tasks. However, comparing Ellen's original perception of language and content as two separate entities to her now redefined consideration of infusing linguistic demands for newcomer students to teach her content was a really important shift in mindset.

For Allie and Jade, the idea of having students to think *"in real-time"* with *"something more complex that requires critical thinking"* seemed to contradict with the types of academic tasks that the teachers were exposing students with during class. There was tension between what they wanted students to be able to produce (real time, critical thinking, and complex) and the structured ways to produce the language that they expected students to follow. This disconnect seemed to surface the recurring issue around academic task design—developing academic tasks that met teacher's rigorous expectations but allowed enough supports that newcomer students could access—and having to reconcile the concept of higher order thinking for both language and content as it applied for newcomer students. Higher order thinking through Bloom's taxonomy assumed language skills were in place. Therefore, integrating language and content involved having teachers explicitly teach the language needed to express the different types of cognition thinking in the taxonomy. Thus, the need for teachers to learn how to scaffold for teaching the language function and forms for higher order thinking and expression was imperative.

Finally, teachers' expectations for students to talk in real time using complex thinking skills required teachers to spend more time and to foster a focus on strategically developing students' academic discourse in order to strengthen content concepts, critical thinking skills and academic language that leads to "communicativeness" (Zwiers & Soto, 2017)—the amount and quality of communication that happens between students. This goes beyond the use of interactive strategies to talk about content in a class period; rather it is about apprenticing students over a duration of time to understand conversations as critical opportunities to exchange ideas towards a larger engaging task, to learn new ideas from others, and an attention to language that models or scaffolds whatever aspects of language that teachers wanted to emphasize to help students effectively communicate. This heavily relied on the quality of the prompt or task that students were afforded, a feature in this design intervention that would need to be revisited in a future iteration.

Activity 8: Plenary Session (1 session)

A plenary session was added as per request from teachers to be able to share with other teachers in the larger grade level team what they learned. It was also a way to get teachers to reflect on their own learning having engaged in an inquiry cycle both as a participant and as a presenting teacher in their small inquiry teams.

Observations of Pivotal Events

In this session, teachers first used a self-reflection tool as shown below before engaging in their team conversation. Then, in their teams, they created posters to talk about the ELD strategy that their team implemented in their content instruction and provided guidance about considerations for implementing the strategy in their own respective content area. They presented these posters to the larger 9/10 grade level team of eleven teachers.

TABLE 4.36 – TEACHER REFLECTIONS

	Allie	Ellen	Jade
What did you learn about your focal student? How does this help you think about other students in your class?	He is very strong at thinking abstractly, but struggles with organization and linear directions. Setting up SIFE students with a partner who can help them in the first cycle of the carousel is really important so they can feel safe practicing and understand the directions of the task. This helps other students in class because all of them can benefit from have specific pairs and practicing to talk about the content that occur more than once over the course of the year. Repetition of activities is helpful for struggling students. I already knew this, but it was good to explore a new activity that can be repeated once or twice per unit.	Pairings for Marco need to be really intentional. He needs to be with someone who 1) knows what's going on and 2) Speaks his language and can clarify questions/concerns that he has as well as model. He takes time to understand the directions, but after repetition starts to access the content and language, producing it well.	It takes Marco several times before he becomes accustomed and successful at a strategy. He needs a lot of time. He is every capable of doing his own speaking role but needs more practice with responding in real-time to his partner about mannerisms.
What did you learn about your own teaching practice?	Incorporating speaking activities is really important but really possible. It is good to do similar activities with new content so students get the speaking practice.	I wish I had time to think about the procedures of every lesson like I did for this one. Feedback from peers was really helpful in terms of how to introduce the tasks on inequalities Working with peers and implementing the same type of same activity/process helps with both giving instructions and allowing students to access content more quickly because the task/process is understood.	I need to work on assessments. Finding ways to hold students accountable in interactions activities. Giving specific feedback too.

Analysis of Activity 8

What was striking about this added activity were the similarities and differences in how the teachers described what they learned about Marco after the series of activities, to how the teachers first characterized Marco during Activity 2. Recall that in Activity 2, teachers unanimously placed Marco in low content knowledge and low English language development. Below, I juxtaposed the two activities:

TABLE 4.37 – ACTIVITY 2 AND ACTIVITY 8 COMPARISON

Activity 2	Activity 8
• Takes him a great deal more time to do both ELD tasks and content-specific tasks compared to peers • But his understanding of directions and ability to communicate his ideas in English is very minimal • Be struggles tremendously to complete tasks appropriately, even if he works consistently the whole period. • Understand many concepts in the course (Math), but at a much slower pace than the average newcomer student. • Has trouble connecting ideas in math and is more successful working on isolated concepts one at a time. • Be has limited education so little experience with literature and writing and almost no prior exposure to English	• very strong at thinking abstractly, • struggles with organization and linear directions • takes time to understand the directions, but after repetition starts to access the content and language, producing it well. • takes several times before he becomes accustomed and successful at a strategy. • needs a lot of time. • very capable of doing his own speaking role but needs more practice with responding in real-time to his partner about the content.

In both activities, teachers described Marco as needing more time to perform tasks during class, particularly around understanding directions and just needing more time and more practice; these descriptions fell under the indicators of English language development (see Table 4.17). And from Jade's lesson debrief, it was noted that Marco transferred his L1 to learning English better than most students, though it did require him more time. Thus, having a more nuanced understanding of Marco's primary language (L1) transfer abilities and visual learning style, we gained a better understanding behind the narrative around Marco's need for "more time." However, we noticed that with repetition and practice, Marco could actually produce language well. Contrary to how the teacher team rated him during Activity 2, Marco was not "low" in content, rather Marco was actually very strong in abstract thinking and that he understood the academic concepts in his classes. This was evidenced from teachers' evaluation of Marco's increased understanding of content over the duration of the intervention activities.

Activity 9: Post-Cycle of Inquiry Interviews (4 sessions)

This post-cycle interviews served as another mechanism to gather process data from participants in the inquiry cycle. This one-on-one interview with teachers utilized a semi-structured interview protocol (see Appendix D) with a goal of surfacing learning that teachers would like to further articulate their learning via conversation. In addition, a student interview was conducted that helped to corroborate the teacher interviews and what teachers surfaced during the intervention activities. For the student interview, I used a structured interview protocol (see Appendix D) and had a translator during the interview process. I had another translator transcribe and translate the student interview from Spanish to English.

Analysis of Activity 9

Teacher Interviews

In all three interviews, I uncovered the strong dynamics among the teacher team members. The three teachers seemed to have had a history of having worked together over a number of years and have developed a sense of trust with each other. Allie described this as:

"In my little team are people that I've worked closely with for almost two years now... I already value their feedback as colleagues and they feel like comfortable getting their feedback and you know... we have a relationship. I know them well... I feel like the people that I was presenting to would actually give me good input."

In addition, Ellen added:

"Especially my team, I'm really comfortable with... definitely comfortable to try new things with them... And I feel like also they're generally the first people I go to for problem solving in terms of behavior, lesson planning, and... if I want to try something they're kind of the first people I go to anyway..."

Ellen described her experience as the second presenter to be beneficial for her since she was able to see how Allie engaged with the cycle of inquiry process first. For her, it was helpful to be able to see someone model the process, learn from it, then inform her own lesson implementation that fit her own class and content. Ellen articulated her takeaway as:

"We talk about the language and content... like the cognitive overload... rather its like three things: its language, content and process... If students don't understand the process, it needs to be familiar language and content... it's really not just the language and content... but its also working with the process..."

In this excerpt, Ellen was alluding to the instructional strategy of modulating language and content (Gersten & Baker, 2000), where cognitive demands may purposefully be lessened so that students could develop confidence in experimenting with extended English-language production to talk more about the content or vice-versa. However, she included the concept of "process" as another consideration when it came to supporting newcomer students in thinking about the cognitive load that students had to simultaneously cogitate along with the content and the language. This recurring theme of "process" that teachers articulated in various lesson debriefs and lesson presentation activities suggested a connection between how teachers perceived the "consistency in procedures" indicator as an essential mediating construct in terms of newcomer students being able to balance the language expectations and content understanding during instruction. Meanwhile, the gamble with the over-simplification of the content to accommodate for the language development could actualize; this connected to the tension of teachers' wanting students to demonstrate higher order thinking. Thus, clarity around the purpose of the lesson, through the explicit use of content and language objectives, could provide better articulation to the often, vague distinctions involved when language development was the major goal or when content understanding was the priority.

With respect to improvements in their practice, all three teachers mentioned "assessment" and "assessing" and how to best include that in their activities, particularly around speaking. Allie provided more details to her concern around "assessment:"

"I think I would next time focus more on that... which I think could really make their conversations feel more meaningful... they [students] were focusing on producing the

language of humanized and dehumanized but I realized that was what I was trying to get them to say was like somewhat surface level analysis and that might have been less motivating than if it was something like really meaningful…"

This was a critical learning that Allie surfaced since she realized that the task she was asking students to produce through speaking exercises was superficial in that, the task itself only allowed students to tap into surface level discussion and analysis. If she wanted students to not only speak to each other, and also to speak about more meaningful things, she needed to find ways to make the conversation topics around ideas that were meaningful and that would motivate students; this again circled back to task design.

Although Jade found the use of sentence frames helpful for students, she honed in on the task itself:

"I think about the organizer that students are using and how they're using the frames… it was a little like it wasn't in order and I had the frames here but then the questions about mannerisms were there [points to the guide]… so its just organizing it so its very clear for the students in that they're using the frames in some way to talk about the mannerisms."

In this reflection, Jade pointed out the layout of the organizer in addition to the actual process of the activity in order to effectively teach the content around cross-cultural mannerisms. She stressed the need for clarity in both the process of the activity and the details of the various materials that came with the activity, particularly for teaching newcomer students. Again, this connected to the way the task was designed.

Student Interview

During Marco's interview, he described the way he learned new words in English [translated from Spanish]:

"If they [teachers] write in on the board, I try to repeat it once and then repeat it again over and over. I practice it with my mouth [until] I get used to it and then later it won't be as difficult to pronounce. I try to understand it because they [teachers] have showed me 100 words in English. I try to link them. For example, if they [teachers] give me the word "only," I remember it means "alone."

From this excerpt we receive a glimpse of Marco's learning process when it came to language learning. For him, repetition was one of his strategies. He required practice in pronouncing the word in English until he developed a level of fluency. One of the ways he tried to understand the meaning of word was by making connections and associating new words to schemas he already had around other words. This word association strategy that he described, was how he navigated through learning abstract concepts. In terms of support, a most appropriate form of scaffolding for him would be concept mapping.

When asked about his experience in the conversation carousel activity that he did in three of his classes and the content that he learned in each of the three classes, Marco was able to recall and expand on the specific concepts and content specific vocabulary in his classes:

"Adjectives… verbs… discrimination... humanize… starting point… slope… equation… power… product…"

When asked to provide an example of what he learned in one of his classes, he spoke about what he was learning in Jade's class [translated from Spanish]:

> "*Differences of manners between my home country and America. Another example, we also talked about the capacity this country has [compared] with my country. For example, this country has a lot of opportunities if one knows how to value them. In my country, there is very little money, little opportunity, and the majority of children at 8 years old start working…*"

Confidence seemed to be a factor in his ability to produce and engage during class activities. He articulated this during his interview as [translated from Spanish]:

> "*I like to participate in everything. Sometimes there are activities where I get nervous. I get scared… where my heart goes… (acts out being nervous)*"

Macro's explanation connected back to issues of confidence that teachers articulated in their discussions about Marco. Marco's hesitation was rooted in his ability to build his confidence to perform something. Thus, repetition and having multiple ways to practice appeared to be his learning mechanism to build his confidence, which his teachers perceived as "needs more time." For him, the concept of repeatable processes and structures served as a scaffold for his own learning, especially in being able to produce English.

When asked how other students in his class helped him learn what he needed to know in his classes, he stated [translated from Spanish]:

> "*Well for example, with my peers, I have various peers who have been here for awhile… so they know the majority of English words. They help me translate the word or sometimes they say, 'I will tell you and you need to repeat it and write it' Talking to my friends in English helps me. For example, we practice speaking new words everyday and that helps me when we touch on different conversations. Sometimes my teacher gives me different words when I am in class. For example, I didn't know how to say 'reproduce' therefore, my friends would talk about what they were learning in their classes and what they were having trouble with and I focus on, 'oh my peer has said that word before…' That is how they help me in class. They help me understand a lot of things. It is like right now, conversation, I don't fully understand it. But with writing, I know most of it.*"

Marco had various ways of making meaning of new words in English and sometimes relied on his peers to make these connections. Aside from repetition and practice, he made connections from what he learned from others and connected it from ideas that he already knew. He also articulated that in terms of speaking he still seemed to be developing in it, whereas in writing, he seemed to be more confident in it. This confirmed Jade's assertion that his writing had improved. What was striking about this interview was Marco's ability to respond in Spanish with a certain level of proficiency. He provided details to his ideas and his command of Spanish (L1) was actually very strong. This corroborated with Jade's claim that Marco's transfer skills from L1 to learn L2 was much better than other students: Marco was able to transfer his L1 to learning English better than other students, as Jade mentioned, due to his high proficiency in Spanish.

The process data revealed the various points during the intervention design activities that contributed to the positive shift in teachers' understanding of and practice of integrating language and content in their instruction. All three teachers had improvements in their capacity to identify language objectives in a lesson (Q8 and P3) which can be attributed to Activities 3, 4B and 6, where teachers had to not only identify language objectives in the lesson, but they also applied it to their own lessons, albeit with a range in quality. Additionally, teachers in the study demonstrated a greater depth of reflection when connecting student artifacts to teacher instruction (P4); Activities 3, 5, and 6 provided opportunities for teachers to examine student work artifacts and connected it to the lesson implementation on video and from the lesson plan.

Connected to the impact data findings, teachers' increased capacity to implement specific strategies to create a language-rich classroom (Q7) can be attributed to Activities 4A and 5 of the intervention design. Moreover, opportunities for teachers to improve their capacity to incorporate newcomer students' prior knowledge and experiences into their lessons (Q1) could be captured from Activities 2, 3, 4B, 5 and 6, where teachers focused on one student, discussed ways to improve their instruction, and considered the assets that the focal child brought to their own lesson and instruction. Teachers' improved capacity to connect lesson implementation to their content area instruction using an ELD strategy (P5) connected with teachers' experiences in Activities 2, 3, 4A, 4B, 6 and 7 where teachers displayed enhanced articulation of some unique features of language within their respective content area (Q3), showed improved determination and usage of supports for newcomer ELs in teaching their content (Q4 and Q5), and progressed in supporting newcomer students' use of language functions to make meaning within their content discipline (Q9).

Through the various activities, teachers in this study engaged in self-reflection and team meeting discussions that surfaced their learning and challenges in how to integrate language in their content instruction. In activity one, we gained insight to how the various teachers in the 9/10 grade level team conceptualized the term "English learners." Teachers needed the use of student data that framed the team's conversations around the various typologies of students within the general category of English learners. In activity two, teachers established a common understanding and normed around what they, as a group, considered as language development indicators and subject matter content indicators. They generated their initial conceptions of both language development and subject matter content indicators, and then compared that to a research based framework to arrive at a shared criteria when discussing language and content integration. Additionally, teachers were organized in smaller groups that met their requests of wanting to have smaller group discussions based on the needs assessment collected. The small group configurations were also anchored around a subgroup of students whom the small teacher teams shared; this subgroup of students was eventually narrowed down to one focal student that served as the student of inquiry for the small team of teachers during their inquiry cycle.

In Activity 3, teachers deconstructed a lesson on video starting from the lesson plan to lesson implementation, and then analyzed the resulting student work from the lesson. This promoted discussions among teachers to compare teacher expectations with actual student performance level, in addition to exercising teachers' capacity to identify the ways in which subject matter knowledge could be integrated within an ELD strategy. Meanwhile, Activity 4A engaged teachers in a discussion around selecting a student talk strategy to teach their respective content with their focal student in mind. Subsequently in Activity 4B, participants presented their

upcoming lesson to other teachers in their team through a guided protocol. The protocol allowed teachers to speak to their upcoming lesson in a way that delineated the various planned content and language skills, as well as students' anticipated responses and possible misconceptions. Through the use of the protocol, discussions of the teacher team were oriented towards the shared criteria on language and content indicators, grounded on their focal students' performance, and provided feedback on next steps before the actual lesson implementation. Activity 5 afforded participants to observe a video of one of their team members executing the lesson that was presented from the previous activity; this exercised teachers' observation skills, with a focus on how the lesson demonstrated indicators from the shared criteria of language and content integration, based on teacher actions and student performance.

Activities 6 and 7 enabled participants to converse about the presenting teacher's enacted lesson as it connected to the teacher team's focal student, and how integrated language development and content instruction manifested within the observed lesson. Moreover, teachers reflected on the inquiry process as well as their own learning each time they engaged in one of their colleague's cycle of inquiry. Activity 8 promoted another forum for shared learning among teacher participants, but this time in their small teams and in the larger 9/10 grade level team. Finally, one-on-one interviews with each member of Team 1, as well as the focal student, were conducted for Activity 9. This particular activity served as an opportunity to better understand teachers' perceptions and learning from the cycle of inquiry process around language and content integration, as well as corroborate teachers' viewpoints with the focal student's responses.

CHAPTER 5: DISCUSSION, IMPLICATIONS AND CONCLUSION

INTRODUCTION

Instructional time for newcomer English learners necessitates a balanced integration of language and content within the curriculum (Batt, 2008). The development of the academic uses of language for newcomer students becomes the responsibility of every secondary content discipline teacher to engage these students in meaningful language use for content specific purposes (Heritage et al., 2015). Now more than ever, secondary content area teachers are crucial actors in ensuring necessary language skills are taught and supported for newcomer students in their classes, in combination with a better understanding of their students' language and content learning gaps, and how language works in their respective content disciplines. I found that that the secondary content area teachers who participated in this study struggled to develop a common understanding and enacting effective language and content integration in classroom practice. This design development study aimed to employ a robust intervention that would promote a systematic approach for an interdisciplinary team of secondary content area teachers to have productive conversations around instruction in order to better understand and implement an integrated language and subject matter content instruction.

In the following sections, I first provide a summary of this design development study. Then, I revisit my theory of action and connect it with my findings. Next, I discuss implications of this study as it pertains to transferability, limitations, and to future iterations of this design study. Finally, I conclude with my final thoughts on this design study and the utility of the teacher team cycle of inquiry.

SUMMARY OF THE DESIGN DEVELOPMENT STUDY

The context of this study was a small high school (<500 students) located in a shifting immigrant neighborhood in a large urban setting in Northern California. The school served a distinct student subgroup population of newcomer students—recently arrived immigrant teenagers who had only been in the United States for less than three years and predominantly spoke a language other than English. For this study, the desired goals for teachers were to: 1) help prioritize team meeting conversations around matters surrounding the instructional core using a systematic process; 2) deepen their knowledge and understanding of how to effectively integrate language and content in their own classroom practice in service of improved outcomes for newcomer students; and 3) gain confidence in their ability to implement lessons that intentionally integrate language and content. In order to achieve these goals, an intervention design consisting of nine activities over twenty-three hours was enacted for a grade level team that consisted of eleven teachers and an instructional coach. The grade level team was separated into three smaller teams that consisted of three to four teachers per small team. One of the teams, Team 1, was the unit of study that consisted of three teachers: a math teacher, a social studies teacher and an ELA/Literacy teacher.

Specific aspects of the intervention activities supported the improvements around teacher team meetings in order to move towards the desired goals of this study. By enacting change driver 1—using and sequencing existing schools structures and assets as a way to reduce the learning anxiety of participants—this study succeeded in taking into account within the design of the activities the various ways and familiar structures in which teachers in this grade level team preferred to work. Teachers not only used adapted tools (critical friends/tuning-bridging protocol) and resources (Collaborative Conversations Inventory) that they were accustomed to, but they also were organized in small learning groups. In these small learning groups, the use of a protocol for receiving and providing feedback among teachers was familiar. Meanwhile, learning about colleagues' teaching practices that was focused on students was embedded in the design of the activities as well. Recall that in the needs assessment, teachers strongly articulated their desire to work in small groups, their preference for peer feedback, and learning from each other. In the design of the activities, it was also intentional that teachers engaged in a series of activities that prompted teacher conversations centered on students' learning needs; for this teacher team, inquiry revolved around a focal student that all the teachers taught. Each teacher team member served as a presenting teacher and a participant within their team's cycle of inquiry. This created a sense of urgency and shared accountability for all members of the teacher team since each played a part in their focal student's learning and performance. The systematic, though familiar, process enabled the teacher team to prioritize meeting conversations around matters of instruction, which was the first goal of this design study.

Though teacher team conversations improved in its focus surrounding matters of instruction, there were challenges in the larger group dynamics that emerged as the activities manifested. In the first activity, for example, two teachers questioned the relevance of the inquiry work around English learners into their own practice. They asserted that they only teach "GE-General Education" students, and that they cannot relate to the instruction for the specific subgroup of students that they watched during the instructional analysis video activity (activity 3). The two teachers' conception of the "GE students" they served in their classrooms seemed uninformed in that they were unaware of the "English learners" that were actually present in their GE (General Education) classes. This became an apparent issue that the instructional coach and I had to address. To respond to this, we included the learning around CELDT assessment, and we provided English proficiency data on their shared students once teachers were organized in their small teams. In addition, learning around English learner typologies—newcomer, developing and long-term—used to disaggregate the concept of "English learners" was utilized as a topic to help demystify the umbrella term of "English learners."   The two teachers associated teaching "GE" students as not teaching English learners. However, during their small group discussions, the data revealed that there were students who were "English learners" within the "GE" classes. This was an unanticipated adjustment to the learning for the grade level team of teachers, since my initial assumption was that the 9/10 grade level team of teachers were all aware of the various classifications in the umbrella term of "English learners." This revealed the range of teacher understanding of the students in their own classrooms.

The interpersonal dynamics among Team 1 members were very positive. This was confirmed from activity 9 where teachers revealed their comfort level with each other since they had worked as a team for over two years. This team of three teachers was highly motivated and had a high degree of safety and trust among each other. They took risks in terms of disclosing

their ideas. When disagreements emerged, the teachers capitalized on the conflict as a productive enterprise that elevated their conversation; participation and flow of ideas came naturally for this team of three teachers. Over time, this team engaged in a level of "instructional talk" (Troen & Boles, 2012) that allowed them to gain confidence in using the shared indicators for language development and subject matter content. The small team configuration, sequenced activities, and use of protocols contributed to the teachers' focused conversation around matters of instruction. Lastly, most of the logistical barriers that often plagued teacher team meetings were removed from this teacher team since the instructional coach and myself provided the structure and planning for the team meetings.

DEEPER KNOWLEDGE AND UNDERSTANDING OF INTEGRATING LANGUAGE AND CONTENT

The knowledge base defines the concept of language and content integration to be debatable (Mohan & Slater, 2005) since there is no single pedagogy or model for integrating content and language (Banegas, 2012). Approaching language and content in a balanced way is therefore to a large degree a matter of the instructional model components enacted by the teacher and the students (Banegas, 2012). The extent to which students are required to articulate complex subject matter through written or oral language production is contingent upon the instructional decisions and tasks provided by the teacher (Dalton-Puffer, 2011). However, my findings suggest that integration of language and content is about:

- A better assessment and leveraging of students' current language proficiency status in order to maximize content learning during instruction.
- Building students' capacity to engage in academic discourse.
- A shift from the mere use ELD strategies to talk about content within a class period towards an apprenticeship of students to participate in academic discourse over a period of time.
- Strategically reducing linguistic barriers while also not over-scaffolding in order to stretch students linguistically.
- Developing teachers' ELD instructional mindset.
- Promoting students' language production skills to learn about new content or build upon prior schema to learn about new concepts.
- A balanced treatment and intentional teaching of the content that students would discuss, the expected language that students would produce to discuss the content, and the analytical or procedural "process" of how students would bring together their acquired language and content knowledge.

Part of language and content integration was about better assessment and leveraging of students' current language proficiency status in order to maximize content learning during instruction. One of the change drivers of this design intervention study—Change Driver 3—involved bringing awareness of and addressing specific student learning gaps. Beginning with Activity 2, most of the sequence of activities anchored the discussion around a focal student that helped direct the discussion of the teacher team. By identifying challenges of their focal student, the teacher team was able to target specific instructional supports that could support the child's learning. Team 1's discussion unveiled new learning about the student of inquiry, particularly around the student's learning style and improved language skills and content understanding over

a period of time. A clear example was the way teachers' characterized the student from Activity 2 in comparison to Activity 8. In the earlier parts of the intervention activities, Team 1 teachers identified their focal student as being low in English language development and low in subject matter knowledge; from the knowledge base, this translated to teachers' initial perception of their focal student as being an incipient bilingual (Bunch et al., 2013) within the period of acclimation (Alexander et al., 1994). However, over the course of the intervention activities, Team 1 members realized that their focal student had improved in his language skills and content understanding. The focal students' increased language development in multiple modalities enabled him to engage in some types of academic and social tasks, though not without difficulty in others. In addition, Team 1 teachers recognized that their focal student displayed his increased recall of important information; contemplated on abstract concepts; increased language transfer from primary language (L1) to second language (L2); and his genuine interest to learn as displayed by his effort and involvement in his work, during class, and from his interview. These teacher team realizations corroborated with the student interview during activity 9. Drawing from the literature, the teacher team eventually recognized that their focal student was actually emerging as an ascendant bilingual (Bunch et al., 2013) within the stage of competency (Alexander et al., 1994).

Language and content integration included giving students the opportunities to practice producing language in class about the content. Unlike most secondary classroom instruction where teachers would prioritize content acquisition in order to cover as much content as possible in a given unit of study that left little to no room for language production, teachers in this study expected students to practice producing academic language in their classes to talk about the content. Selecting a collaborative conversation strategy that participants would implement as a team as well as presenting a lesson that applied this collaborative conversation strategy to teach their content helped create the expectation for students to produce academic language. In an effort to encourage and push students to produce English "in real time," teachers often expected newcomer students to produce extended responses to showcase a deeper content understanding as evidenced from the lesson debrief conversations that raised the concern for higher order thinking. Teachers often utilized sentence frames as an entry point for students to produce the extended responses. Though the common use of sentence frames was helpful, it was insufficient. Despite the provision of sentence frames and other supports, teachers realized during the lesson debriefs that the depth of the student conversations were cursory and that students engaged in a task that did not lend itself to rich and meaningful conversations. Therefore, rather than just providing opportunities to practice producing language to talk about the content in class, language and content integration was about building students' capacity to engage in academic discourse. Consequently, how to engage in academic discourse needed to be explicitly taught to students in order to understand the content as applied in discipline specific texts or discourse. This was a needed learning in future iterations of this design study.

Throughout the course of the intervention, participants surfaced the types of explicit language instruction that needed to happen during content instruction that would support students' capacity to engage in academic discourse. For example, both Jade and Ellen highlighted building students' capacity to independently identify responses to questions using key words within the question as a more advanced approach to language development instead of using sentence frames. In addition, Allie illuminated how students not only needed to know the key academic vocabulary words but more importantly when to apply them; this was necessary language study work within content instruction that would support students to develop habits of

engaging in academic discourse. Therefore, language and content integration required a shift from the mere use ELD strategies to talk about content within a class period towards an apprenticeship of students to participate in academic discourse over a period of time. In improving the design of this study, an apprenticeship approach would require 1) an attention to language instruction within content learning that models facets of language that teachers want to emphasize to help students effectively communicate in the discourse of their content specific discipline and 2) an intentional, routinized scope and sequence of instruction around the skills and language that students need in order to understand academic conversations as critical opportunities to learn new interpretations from others, and as a currency to engage in ideological transactions that leads to meaningful, engaging tasks.

A nuanced understanding of their focal student over the course of the intervention activities allowed teachers to gain a better understanding of the types of instructional supports that their focal student needed as well as how to best implement the language supports for their focal student. Teachers often articulated what students were expected to write or orally produce during the lesson through their language objectives. Thus, teacher preparation and skill building around how language works in a given discipline was axiomatic. However, the discussion during the lesson presentation activities and lesson debrief activities often focused on the "process" of enacting the specific ELD strategy in teaching their content, and how the student utilized the ELD strategy as a "process" to learn the content in the lesson. This could partly be attributed to how "consistency in procedures" was a shared indicator that was present in both the ELD and subject matter knowledge columns (see Table 4.17) that the teachers co-constructed; it suggested that teachers interpreted this particular indicator as the bridge that mediated language development and content understanding during instruction. It could also be partially attributed to how the teacher discussions lacked the precision to talk about how language was used in their specific content. This became evident during Allie's interview when she surfaced her developing understanding around how historical texts are often written using *"complex multi-clause sentences."* She realized that she needed to somehow teach students how to deconstruct historical texts to better understand the content instead of adapting the text as a language scaffold because she typically would *"rather have [students] get the words than have to parse out funky sentence structures."* Though her intent to lower the linguistic load in order to create more access was well-intentioned and needed, Allie assumed that features of the English language would become apparent for her students during her content instruction (Hirsch, 2003). Without being intentional and explicit in teaching how language was used in their specific subject matter content, teachers like Allie were faced with navigating the "process and product dichotomy" (Gersten, 1999; Dalton-Puffer, 2011) . If integrated language and content instruction was about reducing linguistic barriers, then we are left with the challenge of not providing students the chance to develop more language. Rather than only having clear language objectives during instruction, language and content integration was also about strategically reducing linguistic barriers while also not over-scaffolding in order to stretch students linguistically. This was a balance that teachers must understand. It required teachers to not only create access for students to gain content understanding, but it needed teachers to also identify clear language targets within students' reach.

CONFIDENCE IN IMPLEMENTING LESSONS THAT PURPOSEFULLY INTEGRATE LANGUAGE AND CONTENT

Language and content integration was about developing teachers' ELD instructional mindset. In Ellen's initial reflection, she *"intentionally tried to separate [language and content] rather than integrate them… and the idea of putting them together…"* was a struggle. Over the course of the intervention activities, Ellen eventually shifted to *"wanting to do more intentional language production in class… think about integrating it into [her] lesson planning and [having] more practice in recognizing spaces [during content instruction] where language integration will feel seamless."* Ellen's shift in ELD instructional mindset could be attributed to the shared understanding that her team have developed around the language and content indicators. Additionally, her experience as the second presenter for her team was beneficial for her since she was able to learn from Allie's experience as the first presenting teacher engaged in the cycle of inquiry. Ellen noted from her post-interview, *"I was the second person which I felt it was helpful because I was able to refer to Allie's class... And that felt easier I think."* Ellen recognized that it was helpful to learn from Allie's lesson reflection, which informed her own lesson planning and content instruction. Rather than follow the same steps to implementing the conversation carousel that Allie enacted to teach her lesson on the portrayal of men and women in the media, Ellen recognized that Allie's version of the conversation carousel may have been too complex for their focal student: *"I feel like its gonna be confusing,… I'm thinking of Marco you know."* Even Jade echoed Ellen's sentiments: *"sometimes I find those dialogue structures very confusing so I never use them."* Instead, Ellen implemented a less rigid approach to the conversation carousel to teach her lesson on inequalities that yielded more participation and language production from the focal student as evidenced from teachers' lesson observations and written reflections. This made visible to members of Team 1 the sense of incremental progress in both their practice and in their focal student's performance.

Noticeable in all the teachers' post interviews and performance tasks, the three teachers expressed their increased confidence in implementing lessons that included ELD strategies for students to speak about the content they learned, though there was a range in the depth of conversations among students. As Allie noted, *"incorporating speaking activities [to talk about the content] is really important but really possible."* Additionally, the placement of where the presented lessons fit within the unit of study suggested that it influenced the degree to which language and content was integrated. Allie's presented lesson near the end of her hegemony unit of study promoted student talk through the conversation carousel about content that students already had knowledge of or had learned regarding the portrayal of men and women in media. Allie then reflected on how, *"it is good to do similar activities with new content so students get the speaking practice."* In contrast, Jade's lesson placement in the beginning of the unit on cross-cultural mannerisms was an entry point to a text that students were about to read in her class. Jade utilized the conversation carousel as a way to promote students to talk about their prior experience in their home country and their understanding of their own cultural mannerisms. This finding implied that language and content integration was also about promoting students' language production skills to learn about new content or build upon prior schema to learn about new concepts.

Over the course of the intervention activities, teachers' confidence in implementing their lessons that intentionally integrated language and content also included the recurring theme around "process." During the lesson presentations and debrief activities, the teachers consistently

surfaced the idea of "process," and even categorized "consistency in procedures" in both the language development column and subject matter knowledge column when co-creating the team's shared indicators during Activity 2. In some lesson presentations and debriefs, the concept of "process" manifested as conversations around the procedure of how students performed tasks in class. As Ellen stated during a debrief activity, Marco was really successful at performing specific routines such as the DO NOWs *"because… he's got it.. he knows how to take it [the DO NOW sheet] out [of his binder].. and that.. he's gotta do it…"* In other lesson presentations and debriefs, the concept of "process" materialized during conversations as discussing students' mechanism for learning. Allie described Marco's method of thinking during a lesson debrief activity as, *"the idea of metacognition comes to mind… because he [Marco] always wants to tell you his thinking process..."* The construct of "process," which could either be procedural or analytical, suggested teachers' understanding of what it takes to integrate language and content for newcomer students. Ellen expressed it as, *"rather its like three things: its language, content and process... it's really not just the language and content... but its also working with the process..."* Teachers perceived the "process" as the mediating construct that newcomer students also needed to learn and understand in order for them to express and apply their content knowledge and the language that they were expected to produce. In other words, there were three cognitive loads that newcomer students had to simultaneously balance. Newcomer students had to equally learn and understand the "process" that they would need to perform in order to demonstrate their understanding of the content while using the expected language to talk about the content. Thus, language and content integration, particularly for newcomer students, required a balanced treatment and intentional teaching of the content that students must learn, the expected language that students would produce to discuss the content, and the "process" of how the students would bring together their acquired language and content knowledge.

IMPLICATIONS FOR DESIGN TRANSFERABILITY AND DESIGN LIMITATIONS

The strength and utility of design development research is the meaningful and explicit interconnections between educational research and teacher practice. There are design elements that helped improve teacher team learning and conversations around language and content integration. They include the use and sequencing of existing school structures and assets; developing a common process of prioritizing instructional conversations around students' needs; bringing awareness of students' needs and addressing specific student learning gaps through a focal student; developing new competencies for participants; and making visible the incremental progress of teacher practice and student performance.

However, it is equally important to recognize the limitations of this design study. Though one can meticulously plan for facilitating collaborative discussions for a group of teachers, there is no certainty as to how the outcome would transpire. For the majority of team meetings, collaboration among teachers was even, particularly in small group settings. Since elements of action research were employed, it was a difficult to consistently maintain the rigor in data collection as an active participant and the researcher within the study. It posed the challenges of conflating roles as the designer, implementer and evaluator. Additionally, bias in data gathering and analysis was inevitable despite the safeguards included within the design to mitigate for them. The dynamics of the instructional coach, participants, and myself as co-designers allowed for the type of reflection and investment in the design process. Without this dynamic, the types

of participant reflections and insights might not have emerged and might have yielded varied results. Because of the relatively small sample size (n=3), findings from this design study are neither generalizable nor could be guaranteed for a broad educational context. This study would only be transferable to similar educational organizations where inter-disciplinary team structures, peer observation systems, structured time and space for designated team meeting already existed. In addition, positive motivation, a pre-established collaborative culture among teachers, and members understanding their role as both language and content teachers for a cohort of newcomer students were givens. Lastly, findings from the study were influenced by the assumptions I made about teachers' acquired skills and understanding, such as their capacity to design high-quality academic tasks or their acumen of their students' levels of English proficiency.

IMPLICATIONS FOR FUTURE DESIGN ITERATIONS

The student subgroup selection activity (Activity 2) promoted teachers' ability to diagnose students' levels of language and content competency, as well as surface their individual conceptions of subject matter content and language development in order to co-construct a shared understanding of language and content indicators. The instructional video analysis activity (Activity 3) helped create a tension between what teachers expected in integrated language and content instruction with actual student performance level. It also helped participants articulate ways that the content was taught through the ELD strategy and built their capacity to articulate the ways in which content could be integrated within the ELD strategy . The video observation activity (Activity 5) helped participants apply their shared understanding of the language and content indicators to how the lesson manifested through the teacher and student actions captured on video. Participants would have benefitted more from the video observations during Activity 3 and Activity 5 if they were to watch the videos twice: once for looking at subject matter content indicators and another for examining language development indicators. The plenary session (Activity 8) was an addition to the original design of the intervention activities that served to share the learning within small group settings and to the larger grade level team. It also provided another opportunity for participants to reflect on their learning and their own teaching practices.

The group norming activity (Activity 1), the ELD strategy discussion activity (Activity 4A), the presenting teacher and their lesson of study activities (Activity 4B), the Lesson Debrief Activities (Activity 6) and the Process Debrief Activities (Activity 7) needed to be revised in order to improve participant learning around language and content integration.

To improve the group norming activity (Activity 1), I would include in this activity an opportunity for teachers to deconstruct the concept of English learners. In addition to introducing the Teacher Team Cycle of Inquiry, a new goal of this activity would be to demystify assumptions around students who are labeled as English learners. Aside from the use of data to make visible the presence of English learner students in most public school classrooms, I would consider introducing a framework (Heritage et al., 2015) in exploring the umbrella term of English learners. This framework would provide teachers a common language about how to best describe and articulate their ideas around the range of students that fall under the category of "English learners."

In revising the ELD strategy discussion activity (Activity 4A), the design of this activity needed more explicit guidance around having teachers identify the content specific expectations

that they wanted students to orally produce during instruction in order to select the most appropriate collaborative conversation strategy. Providing a structured protocol in this activity to assist teachers to better articulate the academic language and key content vocabulary in selecting their ELD strategy could have provided teachers the needed clarity and precision in preparation for Activity 4B.

In a future iteration of this design study, building teacher's capacity to design high quality academic tasks is imperative. My assumption that the teachers in my study already had a solid command of designing high quality academic tasks is inaccurate. It is important to not assume that teachers come with this skill. To safeguard and account for this, the presenting teacher's lesson of study activity (activity 4B) should be extended to include helping teachers to improve their lessons through designing high quality academic tasks that considers both language and content demands before teachers present their lessons to their team members. The consideration of language demands should include the explicit teaching to students of how to engage in academic discourse in order for them to understand the content as applied in discipline specific texts or discourse. An improved high quality academic task enables students to not only engage in higher order thinking, but it also affords them the use of language functions to engage in academic discourse that demonstrates their greater depth of content knowledge. In retrospect, the Teacher Team Cycle of Inquiry was an adaptation of Elmore's (208) Instructional Core framework. At the center of the Instructional Core framework is the high quality academic task that anchors the inter-connections between the content, the student, and the teacher. In other words, the academic task predicts the student performance (Elmore, 2008).

Both the lesson debrief activities (Activity 6) and the process debrief (Activity 7) needed better precision around how teachers discussed language development and subject matter content indicators to push their articulation of language and content integration. Some of the questions in the protocols for both the lesson debrief and the process debrief activities should be revisited and rephrased so that they are more comprehensible for a broader teacher audience. The facilitation for these two activities also need to be more stringent in the use of the protocol about having teachers respond to all the questions that always includes citing evidence from the shared indicators of language development and subject matter content.

In certain intervention activities, particularly Activity 4B and Activity 6, the protocols and the sequence of discussions successfully engaged participants in conversations about the trade-offs that teachers encountered when trying to integrate language and content in their instruction. These conversations unpacked what teachers needed to consider prior to teaching the lesson and how the student would respond to the lesson, as well as teachers' reflections after teaching the lesson and how the student responded to the taught lesson. During one of the lesson presentations, where Ms. V presented the lesson on behalf of Ellen, the discussion about how open-ended or closed-ended questions affected productive discussions among newcomer students re-surfaced. This lingering issue that the team grappled with previously emerged during Allie's lesson debrief conversation. At this meeting, Jade raised how the students struggled to *"agree or disagree"* in the last lesson because *"there were sort of clear answers"* rather than *"something students would have different opinions about."* However, Allie retorted that, *"trying to push [the questions] to be too open-ended [would] … discourage students further because they don't have the language… she [referring to the focal student of Ms. V whom Allie also taught] doesn't have the language to justify her thoughts in English right now…"* These types of trade-off discussions that centered around the difficulty of decision making and the uncertainties

around when to appropriately provide language access and/or push for higher order thinking for newcomer students were consistently present and probed.

Finally, we cannot overlook the role of both the instructional coach and myself in supporting this work for the teacher teams. Between the two of us, we ensured teachers had the proper tools and resources they needed, whether it was generating the list of shared students with student data for the inquiry teams, to creating the agenda, providing copies of the ELD strategies for student-student interaction, and scheduling on the calendar when and where the various activities would take place. It is essential to consider the role of an instructional coach or a facilitator when trying to enact this design study in future iterations. The role of the coach is critical in that the coach not only serves as someone who could manage the logistics of the team meetings, but they also serve as a thought partner when it comes to discussing matters of instruction. So, the instructional coach would need to have both the instructional acumen to engage in discussions surrounding matters of teaching and learning as well as the project management skills to coordinate and marshal the various resources necessary for a teacher team to have the space to discuss matters of instruction.

CONCLUSION

In this study, my goal was to employ a design intervention that promotes a systematic approach for an interdisciplinary team of secondary content area teachers to have productive conversations around instruction in order to better understand and implement an integrated language and content instruction. Research like this design intervention study can contribute to the knowledge base and better inform the practice of secondary teachers.

Building teacher capacity on how to best serve newcomer students can often be treated as a singular issue, situating the onus of the problem on teachers' motivation. Rather, I present the utility of the Teacher Team Cycle of Inquiry as a systematic, structured sequence of activities that helps reframe the responsibility of teaching language development for newcomer students as one of a teacher team's collective and shared responsibility. This teacher team structure alone does not suffice, however. What is also required is a set of explicit learning activities that guide teachers to a better grasp of integration of content and language instruction.

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APPENDIX A: Needs Assessment

Local Needs Assessment
Interview Protocol

A. Interviewee Background

Briefly describe your role (office, committee, classroom, etc.) as it relates to instruction and team structures.
> Probe: How long have you been involved in your team? The school?
> Probe: How did you get involved?

B. Institutional Perspective

How do you think team structures and team meetings are used in the school?
How well do you think the team meetings and structures in the school are working?
Could you describe a situation when a team meeting was productive.
> Probe: What aspects of the team meetings and structures do you find particularly helpful?
>> Could you describe a situation when a team meeting felt challenging.
> Probe: What aspects of the team meetings and structures do you find particularly challenging?

C. Teaching and Learning

What are some common teaching practices that are implemented school wide?
What are the opportunities in the school when teachers can meaningfully talk about teaching practices?
What resources are available to staff for improving their teaching practices in the school?
What resources have you utilized in the school to improve your own practice?
> Probe: What changes have you seen in your own practice that has resulted from the resources that you've utilized?

Describe a specific teaching practice that have you implemented in your class.

D. Professional Growth

How do you feel about your growth as a teacher of newcomer immigrants within this school?
In what ways do you want to improve in your practice regarding teaching recently arrived English learners?
Could you tell me about your PD experience in the school from last year as compared to this year?

Survey Questions I – Semester 1

How long have you been involved at TMAHS?
What classes are you teaching this semester?
What has been most successful so far this school year in your classes?
What has been most challenging?
What growth/success/accomplishments in instruction are you most proud of?
From your perspective, what are the greatest strengths of the interdisciplinary instructional teams? What are they doing well?
From your perspective, what are the greatest challenges of the interdisciplinary instructional teams? What are they struggling with?
What supports have been most valuable to you in your work with ELLs this year?
What additional supports would you find useful?

Survey Questions II – Semester II

Name
Subject you teach
Select your educational background information
       Associates
       Bachelors (BS)/Bachelors (BA)
       Masters (MA)/Masters (MS)
       Doctoral (Phd)/Doctoral (EdD)
       Other:

Select all the credentials that apply to you
       CA Single Subject Teaching Credential
       Other State Single Subject Teaching Credential
       CLAD/BCLAD
       TESOL Certification
       CA Multiple Subject Teaching Credential/CA Administrative License
       Emergency Teaching Credential/Emergency CLAD Credential
       Other:

What types of training do you feel have best prepared you to teach English Learners?
       Graduate school courses
       District PD/School Level staff PD
       Other Organization PD
       TESOL Courses/CTEL Preparation Courses
       Individualized Coaching/Inter-visitations
       Team level meetings
       Other:

Describe some of your PD experiences in learning how to teach newcomer students or English learners.

On a scale of 1-5, how has school-wide staff PD supported your growth as a teacher of newcomer/GE students?

On a scale of 1-5, how do you feel team level meetings have supported your growth as a teacher of newcomer and/or English learners?
      Describe a time when your team level meetings have been productive.
      Describe a time when your team level meetings have been challenging.

On a sale of 1-5, how well do you think the team meetings and structures in the school are working?
      What aspects of the team meetings and structures do you find particularly helpful?
      What aspects of the team meetings and structures do you find particularly challenging?
      What are the opportunities in the school when teachers can meaningfully talk about teaching practices?

What resources are available to staff for improving their teaching practices in the school?

What resources have you utilized in the school to improve your own practice?

What changes have you seen in your own practice that has resulted from the resources that you've utilized?

Describe a specific teaching practice or an instructional strategy that have you implemented in your class?

Could you tell me about your PD experience in the school from previous years compared to this year?

APPENDIX B: IMPACT DATA

TABLE B.1: IMPACT DATA PRE-POST STRUCTURED INTERVIEW PROTOCOL

	#	On a scale of 1-5, to what extent are you confident in…	Probe
Shift in Language Content Integration Understanding	Q1	Incorporating newcomer students' prior knowledge and experiences into your lesson planning?	Describe some examples of how you have tried to incorporate newcomer student's resources and experiences in your lesson planning/lessons.
	Q2	Analyzing your subject matter content standards to gain insight about the language demands for newcomer ELs?	Describe the instructional supports that you've tried in your lessons to support the language demands of your content.
	Q3	Identifying some unique features of language (such as nominalization and passive voice in science texts) within your content area?	Describe some unique features of language within in you subject matter content.
	Q4	Determining supports for newcomer ELs in your content area?	Describe what educators should consider when they determine and use supports for newcomer students in your content area.
	Q5	Using supports for newcomer ELs in your content area?	
	Q6	Providing opportunities for newcomer EL students with varied language proficiencies to engage in higher order thinking?	Describe how you have tried to create opportunities for newcomer EL students to engage in higher order thinking.
Shift in Language Content integration in practice	Q7	Implementing specific strategies to create a language-rich classroom?	Describe specific strategies that you have tried to create a language-rich classroom.
	Q8	Helping newcomer students become aware of language functions in your content discipline?	Describe how you have tried to help newcomer students use language functions to make meaning in your content area.
	Q9	Helping newcomer students use language functions to make meaning in your content discipline?	
	Q10	Balancing instruction to ensure newcomer students practice language use in various contexts and experiences?	Describe ways that newcomer students have practiced language use for various contexts in your class.
	Q11	Communicating language expectations to newcomer students?	Describe how you've communicated language expectations to newcomer students and provided feedback on their language development in your class
	Q12	Providing newcomer students with feedback on their language development?	
	Q13	In your own words, describe your idea of language and content integration.	

TABLE B.2: IMPACT DATA PRE-POST PERFORMANCE TASK QUESTIONS

		#	Question:
Shift in Language Content Integration	ELD strategy competence	P1	*What strategies that promote student-to-student interaction did the teacher employ?*
	Subject matter content competence	P2	*What main concepts (subject matter content) did the teacher attempt to teach?*
Understanding	Identifying language objectives in a lesson	P3	*What language objectives were evident in the lesson?*
Shift in Language Content integration in practice	Connecting student artifacts to teacher instruction	P4	*When you look at the student work generated, how successful was the teacher in implementing the language objective within the lesson?*
	Connecting teacher lesson implementation to subject matter content instruction through the ELD strategy of student-student interaction	P5	*Considering the language objective, how did the teacher successfully or unsuccessfully teach the main concept in the lesson using the ELD strategies that promote student-to-student interaction?*
	Connecting teacher and students actions to lesson outcomes.	P6	*How can you tell from looking at the student cues in the video that it was the specific teacher moves to integrate language and content that contributed to deeper content knowledge and/or language development?*

TABLE B.3: RESEARCHER PRE-POST INTERVIEW RUBRIC

Q's	1	2	3	4	5
Q1	No mention of student background, L1 background or prior schooling experience or knowledge.	Limited mention of students' assets around their culture, L1, or prior knowledge	Mentions immigrant students' assets, such as: • L1, cultural background • lessons or units that address student identity and their immigrant experience and/or home life.	Mentions immigrant students' assets, such as: • L1, cultural background • lessons or units that address student identity and their immigrant experience and/or home life. • Adjusts instruction based on student needs and feedback	Mentions specific qualities of • students' native language fluency (reading, writing, speaking and listening) and how they infuse that in their instruction, • elaborates on units/lesson that explores students' immigration stories and ethnic identity, • specific lessons that elicit students' stories and connections to their native country
Q2	No mention of standards or no articulation of instructional supports Cannot articulate language demands of their content	Acknowledges Standards but do not use them in planning Some articulation of language demands in teaching their content	Mentions Standards as it relates to their content area and articulates: • specific instructional supports in lessons implemented • basic language demands in their content area: such as specific academic vocabulary, explicit grammar, word study	Mentions content standards and how they integrate it in their planning and articulates: • specific instructional supports in lessons implemented • more nuanced language demands in their content area: such as use of appositives and cultural context of a text	Articulates specific instructional supports that incorporates explicit language instruction: • unpacking complex texts • explicit writing instruction using complete sentences. • Explicit reading strategies and supports
Q3	Unclear of what "unique features of language" is in their content area	limited mention of language features in their content area such as content vocabulary	Provides some articulation of their content area language features such as nominalization, passive voice, tenses, specific content vocabulary and etc.	Articulates content language features: • content specific discourse (beyond academic vocabulary) • surfaces aspects of text complexity	Articulates: • Text complexity (lexile level, layout, and etc.) • Historical contexts/Context based texts • Content specific vocabulary with multiple meanings (tiered vocab) and discourse

Q					Fully articulates
Q4 / Q5	Unclear of appropriate supports for newcomer students	limited mention of supports for newcomer students	Articulates: • Proficiency in L2 of student (any modality) • At least 2 types of supports (L1 use, use of images/drawings, nonverbal cues, and etc.)	Articulates: • awareness of students' L2 level including SIFE status • Interventions provided to varied student levels in class • At least 4 types of supports (L1, groupings, scaffolds and etc.) and articulates ways it supports students	Fully articulates • awareness of students' L2 level including SIFE status • Interventions provided to varied student levels in class • At least 4 types of supports (L1, groupings, scaffolds and etc.) and articulates ways it supports students with clarity on function of the support provided
Q6	Cannot articulate higher order thinking opportunities in their practice	Limited mention of supports for higher order thinking opportunities during instruction or planning	Articulates: • Provision of rich, collaborative tasks for students • Uses various questioning techniques and scaffolds questions from easy to difficult (5Ws) • Attempts to provide varied leveled readings/tasks	Articulates: • Provision of rich, collaborative tasks for students using more than one modality • Uses various questioning techniques and scaffolds questions from easy to difficult (5Ws) • Provides varied leveled readings tasks	Articulates: • Provides appropriate tasks that uses various modalities for students' varied language proficiency levels • Provision of rich, collaborative tasks with questions that elicit why and how • Opportunities for students to demonstrate DOK level 3 and 4 skills in application, synthesis, evaluation and creation.
Q7	Mentions no strategies implemented	Articulates at least 1 strategy that promotes students' language development in teaching their content with no explanation.	Articulates at least 2 strategies that promote students' language development in teaching their content with limited explanation.	Articulates at least 3 language development strategies they've implemented in their classes to teach their content. Provides some articulation of the purpose of the strategies and how it supports students.	Articulates at least 4 language development strategies that they've tried to implement in their classes to teach their content and discusses them with detail and articulates what these strategies do to support students and where it would specifically help students.
Q8 / Q9	No awareness of language functions in their content discipline	Limited mention of language functions as to how it is related to their content	Articulates: • Use of sentence frames that included in a task to talk about the content • Use of language objective in the lesson • Explicit use of language objective and have students practice accompanying language frame to produce English to talk about the content	• Use of language objective in the lesson with clear activities that have students practice the language objective • Provides support (such as sentence frames) as a way to engage students to use the language to speak about the content being taught	• Evaluates students' use of academic vocabulary and learned sentence frames around a language function to talk about the content through an activity or task • Provides specific language development content within the subject matter being taught such as word/sentence level or grammar type content. • Articulates ways to assess if language objectives are met or learned by students

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	No mention	Limited	Provides some / explicit	Provides activities / clear norms	Highest level
Q10	No mention of how students can practice language use in various contexts or experiences	Limited mention of activities to practice language using turn and talk, pair/share, group work	Provides activities that allows students to apply content learned and practice their language such as interviews, surveys, community events and other interactive tasks within or beyond the classroom walls	Provides activities that allows students to talk about class content through interactive tasks or assignments mostly beyond the classroom setting	Providing meaningful tasks that allows students to not only interact outside of class to learn about the content but also practice the language in real world contexts such as an internship or an action research project in the community, organizing a community event or school level event.
Q11 / **Q12**	• No mention of how language expectations are communicated to newcomer students • No mention of how feedback is provided to students on their language development	• Limited examples of class structures or procedures that provides language expectations (e.g. pair/share without structures) • Limited general feedback to student (good job and etc.)	• Provides some examples of classroom structures (e.g. language objectives for students, DO NOWs) that provide clear language expectations to students such as the use of translators or answering in complete sentences. • Provides some examples of providing feedback to students such as direct checking of student work or written feedback on assignments	• Provides clear norms and structures using various modalities that includes students leading opening of class and students leading discussions • Provides specific feedback around students' area of growth and successes such as, "great use of analysis frames to talk about…." "You could improve on providing specific examples about… using our 5 vocabulary words for the day…"	• Setting classroom norms and structures around their writing and speaking; this includes the use of DO NOWs or peer editing to name a few. • Use of end of period to provide plenary of the lesson providing specific examples of what "good looks like" as expected by the teacher to the students; leveraging student work/actions to highlight the expectations.
Q13	Cannot articulate basic ways to integrate language and content	Teaching vocabulary words for the unit or content being studied	Includes the explicit teaching of a form of language development (vocabulary, grammar, and etc.) within the teaching of the content through oral and/or written.	• Provides clear articulation of the content objective/goal and how the language objective/goal is used to support the learning of the content • Speaks to the way content is discussed (written or oral) through a specific language goal in a lesson that includes opportunities for students to practice	In addition to explicit mention of a specific language development concept within the teaching of the content, participant articulates the role of process in the integration of language and content and how structured processes/strategies that are consistently implemented allows for students to practice the expected language goal and lessens the cognitive load for students; students are thus able to focus on the language and content demands in a lesson.

TABLE B.4: IMPACT DATA – PERFORMANCE TASK MATH RUBRIC

	4	3	2	1
P1	Accurately identifies and thoroughly describes at least three of the following strategies: *intentional grouping, group roles, modified directions, use of manipulatives through a group worthy task, use of gestures and physical cues, use of participation quiz.*	Identifies at least two strategies and sufficiently describes the strategy employed.	Describes what occurred in the video and identifies one strategy employed.	Describes what occurred in the video and is not able to identify a strategy employed in the video.
P2	Accurately and thoroughly articulates the *domain knowledge of functions and how graphs, T–tables and situations are related and represent the same function and the topic knowledge on connecting tables and graphs with real world scenarios and articulates the math practice of reasoning abstractly and quantitatively. The most important concept students should learn from this lesson is that there are multiple representations for the same function/situation.* Articulates learning goal as (teacher): *By the end of the lesson students should know how graphs, T–tables and situations are related and represent the same function.*	Mostly articulates the topic knowledge of connecting tables to real world scenarios and providing an explanation.	Articulates some of the topic knowledge regarding connecting tables to real world scenarios.	Is not able to articulate main concepts (topic knowledge) taught by the teacher.
P3	Articulates learning target written as (student): *I can make connections between T-tables, graphs and situations but not specific enough since it includes no identification of the language function forms that students need to use.*	Articulates most aspects of the language objective written.	Articulates some aspects of the language objective written.	Does not identify language objective.
P4	Thoroughly articulates *supporting student work evidence where student displays some portions of the graph correctly, includes a table that represents the graph, but some parts are incorrect or missing, such as student describes "decreased by 40 meters" instead of 60 meters, "ran all the way to the bus stop in 180 seconds" instead than 30 seconds, and "he rides the bus" instead of waited for the bus for 20 seconds; then provides an explanation to lesson implementation and how the student work task includes a table created by the student despite the directions of the task not explicitly stating the use of a table.*	Mostly articulates supporting student work evidence that explains reasoning for lesson implementation.	Limited articulation of supporting student work evidence that explains reasoning for lesson implementation.	Does not articulate supporting student work evidence that explains the reasoning for lesson implementation.
P5	Thoroughly identifies teacher actions of *participation quiz enactment, encouraging student talk and explaining the concept of past tense through having group roles, providing modified directions, the use of manipulatives through the task* to provide evidence that fully supports and connects their reasoning for the lesson implementation outcome.	Identifies at least 2 teacher moves and provides evidence that adequately supports reasoning for lesson implementation outcome.	Identifies one teacher move and provides limited evidence that supports reasoning for lesson implementation outcome.	Identifies a teacher move but does not provide evidence that supports reasoning for lesson implementation outcome.

4	3	2	1
P6 Thoroughly identifies *student to student talk, facility and understanding of group roles and task, use of transition words (first, then and etc.) and use of native language to make sense of the math scenarios* and connects these to the teacher actions of *redirecting Spanish conversation and responding in English, making sure other students explain to other group members, utilizing group roles, use of vocabulary (increase/decrease, fast/slow) to describe change in speed,* and the use of participation quiz to hold groups accountable to the lesson outcomes and provides evidence that fully supports their reasoning.	Identifies two student actions and makes some connections to at least two teacher actions and lesson outcomes by providing some evidence that supports their reasoning.	Identifies one student action and superficially connects to one teacher action and lesson outcomes by providing personal, anecdotal evidence to support their own reasoning.	Identifies a student action but does not provide evidence that connects to teacher action and lesson outcomes.

TABLE B.5: IMPACT DATA – PERFORMANCE TASK LITERACY RUBRIC

	4	3	2	1
P1	*Accurately identifies and thoroughly describes at least three of the following strategies: dyads, split dictation, explicit use of clarifying questions, use of visualization, through a group worthy task, use of gestures and physical cues, leveraging native language and translation.*	*Identifies at least two strategies and sufficiently describes the strategy employed.*	*Describes what occurred in the video and identifies one strategy employed.*	*Describes what occurred in the video and is not able to identify a strategy employed in the video.*
P2	*Accurately and thoroughly articulates the domain knowledge of personal identity and the topic knowledge on Frida Kahlo's biography and articulates the similarities, differences and connections between an immigrant's native country and the US.*	*Mostly articulates the topic knowledge of connecting tables to real world scenarios and providing an explanation.*	*Articulates some of the topic knowledge regarding connecting tables to real world scenarios.*	*Is not able to articulate main concepts (topic knowledge) taught by the teacher.*
P3	*Language objective is written as:* (Teacher version) *I will collaborate with my group to use academic discussion to understand the main ideas in my reading guide.* (Student version) *I can talk with my group to discuss and understand the main ideas in my reading guide.* *Articulates the use of the vocabulary words, I miss and portray, and identifies that the language objective is not specific enough to address the language forms to use during the discussion.*	*Articulates most aspects of the language objective written.*	*Articulates some aspects of the language objective written.*	*Does not identify language objective.*

P4	*Thoroughly articulates supporting student work evidence where student displays use of native language (Spanish) in their writing, use of word bank and associated visual representation, and the use of the explicit vocabulary (and translation) and sentence frames to write responses to the focused questions in the reading guide.*	*Mostly articulates supporting student work evidence that explains reasoning for lesson implementation.*	*Limited articulation of supporting student work evidence that explains reasoning for lesson implementation.*	*Does not articulate supporting student work evidence that explains the reasoning for lesson implementation.*
P5	*Thoroughly identifies teacher actions of explicit use of dyads, structured read aloud in pairs for guided reading, the use of visualization to draw ideas from text, eliciting translation from students, leveraging native language in explanations, split dictation guide, and provides evidence that fully supports and connects their reasoning for the lesson implementation outcome.*	*Identifies at least 2 teacher moves and provides evidence that adequately supports reasoning for lesson implementation outcome.*	*Identifies one teacher move and provides limited evidence that supports reasoning for lesson implementation outcome.*	*Identifies a teacher move but does not provide evidence that supports reasoning for lesson implementation outcome.*
P6	*Thoroughly identifies pair read-aloud, understanding of roles and task, and use of native language and translation to make sense of the text and connects these to the teacher actions of redirecting to visualization and responding in English, making sure other students explain to other students even if it's in their native language, use of clarifying questions to the lesson outcomes and provides evidence that fully supports their reasoning.*	*Identifies two student actions and makes some connections to at least two teacher actions and lesson outcomes by providing some evidence that supports their reasoning.*	*Identifies one student action and superficially connects to one teacher action and lesson outcomes by providing personal, anecdotal evidence to support their own reasoning.*	*Identifies a student action but does not provide evidence that connects to teacher action and lesson outcomes.*

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Pre and Post Intervention Performance Task: Video Observation Guide (Use of student-to-student interaction that shows language and content integration in practice)

Low Inference Teacher Moves		Low Inference Student Cues	

Inferences:

Wonderings:

Looking at Student Work Guide

What should the student have been able to do based on the given task?	What does the work reveal about what the students actually performed?	Teacher moves during the lesson	Student cues contributing to the student work
What aspects of the learning objectives did the student meet?

What do the teacher's expectations require students to know and be able to do? | Where in the work do you find gaps?

Where in the work do you see insights into student thinking? How about language development? | What types of moves did the teacher enact during the lesson that can help explain the student work? | What types of student cues/actions occurred during the lesson that can help explain what contributed to the resulting student work? |
| | | | |

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Focus Questions:

What strategies that promote student-to-student interaction did the teacher employ?	
What main concepts (subject matter content) did the teacher attempt to teach?	
What language objectives were evident in the lesson?	
When you look at the student work generated, how successful was the teacher in implementing the language objective within the lesson?	
Considering the language objective, how did the teacher successfully or unsuccessfully teach the main concept in the lesson using the ELD strategies that promote student-to-student interaction?	
How can you tell from looking at the student cues in the video that it was the specific teacher moves to integrate language and content that contributed to deeper content knowledge and/or language development?	

APPENDIX C: PROCESS DATA TOOLS AND PROTOCOLS

PROCESS DATA

ACTIVITY 1: MEETING RECORD – OBSERVATION GUIDE

Date:	Type of meeting:
Beginning:	Minutes late:
End:	Minutes early:
Present:	Absent:
Tardies:	Early leavers:

Topic(s) of the meeting:

Lower-inference description of proceedings	Higher-inference interpretations:
Narrative:	*Narrative:*

Group Development

Interpersonal dynamics: • Motivation • Safety, trust, • Disclosure, risk • Participation, flow of ideas • Emotional intensity • Productive conflict	
Task processing (generic): • Goal orientation (vision, goal, agenda, plan) • Task assignment • Task clarity • Task completion • Shared responsibility/ accountability (for group and task) • Agreement • Consistency	
Group processing: • Roles/ facilitating / leading / other roles • Following procedures/ protocols • Abiding by group norms • Clarity in communication • Hearing other members • Tolerating difference • Moving towards results • Evaluating accomplishments	

Policies or Decisions (adopted by the group)

Memo and Next Steps

ACTIVITY 2: MEETING RECORD – OBSERVATION GUIDE

Date: Type of meeting:

Beginning: Minutes late:

End: Minutes early:

Present: Absent:

Tardies: Early leavers:

Topic(s) of the meeting:

Lower-inference description of proceedings	Higher-inference interpretations:
Narrative:	*Narrative:*

Student Subgroup Selection

Student Descriptions • Peer interaction • Participation	
English Language Development • Oral Proficiency/Aural • Reading/Writing • Native Language Use • Academic Language Skills	
Subject Matter Knowledge • Consistency in procedures • Clearly articulates topic knowledge to domain knowledge connections • Recall of information (less important to salient) • Distinguishes degree of importance in text • Navigating abstractions • Personal investment and interest	
Group Development • Interpersonal Dynamics • Task processing • Group Processing	

Policies or Decisions (adopted by the group)

Memo and Next Steps

ACTIVITY 2: Student Subgroup Selection Matrix

		SUBJECT MATTER CONTENT		
		LOW	MID	HIGH
ENGLISH LANGUAGE DEVELOPMENT	**LOW**			
	MID			
	HIGH			

Content	Language

ACTIVITY 2: Clarifying Student Group Selection Protocol

● Each participant locates each of the team's selected students in the Content/Language matrix. (2 minutes)
● Each participant individually writes their criteria for both language and content based on how you placed your students in the matrix. (5 minutes)
● Each participant share their articulated criteria for language and for content. (10 minutes)
● Based on whole group share, team comes to a consensus on how they define and articulate each of the categories in both language and content. (10 minutes)
● Recorder reiterates to the team how their shared understanding of language and content categories. (3 mins)

ACTIVITY 3: MEETING RECORD – OBSERVATION GUIDE

Date: Type of meeting:

Beginning: Minutes late:

End: Minutes early:

Present: Absent:

Tardies: Early leavers:

Topic(s) of the meeting:

Lower-inference description of proceedings	Higher-inference interpretations:
Narrative:	*Narrative:*

Video Analysis

Teacher Moves • Questioning • Length of teacher talk • Clarity in providing directions • Assigned Task • Student – Teacher Interaction	
Student Cues • Peer interaction • Task engagement and participation • Opportunities to speak and listen • Asking questions (to other students) • Navigating abstraction using resources	
Strategy Implemented • Introduces a strategy in class • Articulates the purpose of strategy in class • Student use of strategy • Fluency of using strategy • Evidence of strategy comprehension • Effectiveness of connecting strategy to content	
Group Development • Interpersonal Dynamics • Task processing • Group Processing	

Policies or Decisions (adopted by the group)

Memo and Next Steps

Activity 4A: ELD Strategy Menu (Student-to-Student Interactions)

Complete List and Descriptions of Strategies:
https://drive.google.com/file/d/1BSOXRG8d-Gz8kJ_ByxoQ-HA5RhcGzOo3/view?usp=sharing

Strategy	
A Large Group / Whole Class Formats	• Physical Barometer • People Graph • Philosophical Chairs • Four Corners • Socratic Seminar • Fishbowl • Pinwheel Discussions • Two Cents Worth • Expert Panel / TV Talk Show • Debate
B Small Group Formats	• Snowballing. • Envoys • Jigsaw • Thinking Hats • Gallery Walk • Stations • Numbered Heads Together • Listening Triads • Talking Chips
C Paired Formats	• Movie Critic • Quote Café • Role–Play • Museum Curators • Pre–Writing Conversations • Discussing Images • Pro/Con • Academic Controversies • Two–on–Two Debates • Discussion Cards • Think–Pair–Share • Listening/Conversation Carousel • Give One, Get One

ACTIVITY 4A: MEETING RECORD – OBSERVATION GUIDE

Date: Type of meeting:

Beginning: Minutes late:

End: Minutes early:

Present: Absent:

Tardies: Early leavers:

Topic(s) of the meeting:

Lower-inference description of proceedings	Higher-inference interpretations:
Narrative:	*Narrative:*

Selecting ELD Strategy

Student Descriptions	
• Peer interaction • Participation	
English Language Development	
• Oral Proficiency/Aural • Native Language Use • Academic Language Skills	

Content and Subject Matter Integration	
• Central subject matter concept • Teacher perspective of learning goal • Student perspective of learning goal • Explicit ELD strategies (student-student interaction) for accessing content • Use of appropriate tasks and materials	
Group Development	
• Interpersonal Dynamics • Task processing • Group Processing	

Policies or Decisions (adopted by the group)

Memo and Next Steps

PRE-ACTIVITY 4B: PRESENTING TEACHER PLANNING DOCUMENT

Planning Template

Lesson Components:	Instructional Moves	Scaffolds/Assessments/ Supplements
Unit/Lesson		
Essential Questions based on lesson's objective and mini-lesson:		
Instructional Objective/Aim: Content/Language objectives		
Do Now/Opening:		
Lesson:		
Guided Practice and/or Independent Work:		
Closing		
Assessment/ Homework		

Planning Questions:

Essential Questions based on lesson's objective and mini-lesson:	• What are the important concepts or skills that students will be learning?
	     • What are the central concepts or ideas I intend to teach in your unit or your lesson?
	     • What is my "teacher" understanding of the new concepts or skills?
	     • What do I think might be the students' understanding of the concepts or skills? How will I bridge students' understanding with my "teacher" understanding?

Instructional Objective/Aim: Content/Language objectives	• What explicit strategies of **language development (promoting student-student interaction)** will I use that enables English learners to access the content of the unit or lesson?
Do Now/Opening:	• What opportunities can I create for students to make meaningful connections between concepts? Between their lives? Express their identity and culture?

Lesson:	What opportunities do I provide so that students engage in productive struggle?
	     • How long do I give students to spend on each prompt or activity?
	     • Does my set of questions invite explanations or answers?
	     • Does my planned unit/lesson include multiple ways to get involved productively?
	     • What materials, explanations, or prompts will I use to address the variety of cultural, linguistic, and personal experiences present in my classes?
	     • How do I ensure that a range of students respond to my questions?
	     • How can I have the students give extended explanations?
	     • How could I vary the lesson in light of student responses?
	     • What are possible students' misconceptions that I need to consider?

Guided Practice and/or Independent Work:	• How will I follow up on student responses? • How do I give feedback that helps students to think along?
Assessment/Closing Homework	

ACTIVITY 4B: MEETING RECORD – OBSERVATION GUIDE

Date: Type of meeting:

Beginning: Minutes late:

End: Minutes early:

Present: Absent:

Tardies: Early leavers:

Topic(s) of the meeting:

Lower-inference description of proceedings	Higher-inference interpretations:
Narrative:	*Narrative:*

Teacher Work Analysis

Content and Subject Matter Integration • Central subject matter concept • Teacher perspective of learning goal • Student perspective of learning goal • Misconceptions and Prior knowledge (anticipation) • Explicit ELD strategies (student-student interaction) for accessing content • Use of appropriate tasks and materials	
Group Development • Interpersonal Dynamics • Task processing • Group Processing	

Policies or Decisions (adopted by the group)

Memo and Next Steps

ACTIVITY 4B: Adapted Tuning and Bridging Protocol

This protocol is a process for looking at a piece of curriculum and receiving feedback to incorporate into instruction.

Presenting Teacher: (10 minutes)
To begin, the presenter explains his/her work while other participants are silent. The presenter should speak to …

1. An upcoming Unit of Study/Lesson, which includes the topic and larger domain of subject matter. It might include tasks, lessons, or prompt that will generate student work.
2. Bridging Questions:
   a. What are the central concepts or ideas you intend to teach in your unit or lesson?
   b. What is your "teacher" understanding of the new concept(s) or skills?
   c. What do you think your focal student's understanding of the concepts or skills? How will you bridge the "student's understanding" with your "teacher understanding"?
   d. What might the students' misconceptions be that you need to consider?
   e. What connections will you make between the student's prior knowledge and interest and the new concept(s) or skills?
   f. What explicit strategies of language development (student-student interaction) will you use that enables your focal student to access the content of the unit or lesson?
   g. What materials, explanations, or prompts will you use to address the cultural, linguistic, and personal experiences of your focal student in the class?
3. Any specific feedback you would like about the lesson/unit.

Examination of Curriculum: (5 minutes) Silent Examination of Paperwork Provided
Participants look at presented curriculum/lesson and take notes on where it seems to be in tune with goals and sections where there might be concerns or questions. Make note of warm and cool feed back and probing questions.

Clarifying Questions: (5 min)
Group members can ask clarifying questions, to the presenter, that **has brief, factual answers**. (Ex. How many days is the project/lesson?)

Probing Questions: (5 min)
Group members can ask probing questions to the presenter that **have more complex answers** (ex: What do you want students to be able to do/produce by the end of the project/lesson?)

Warm and Cool Feedback: (10 minutes)
Each participant shares feedback with the presenter who is silent and taking notes. Participants refer to presenter in third person and they identify where the work seems to meet the goals and then continue with possible areas of improvement. They provide suggestions. **Make sure to provide suggestions that consider the presenting teacher's response to the Bridging Questions**.

Reflection: (5 minutes)
Presenter speaks to those comments and questions he or she chooses to while participants are silent. This is a time to explore interesting ideas that came out of the feedback session to incorporate in their lesson.

ACTIVITY 5: Classroom Observation Guide/Video Observation Guide

Teacher: Grade Level/Subject Area:

Lesson Topic: Date:

ACTIVITY 5: Classroom Observation Guide

Low Inference Teacher Moves	Low Inference Student Cues

Inferences:

Wonderings:

GUIDING QUESTIONS	
Are the explanations to the academic task presented clear?	
How much time is the focal student given to think, and to make sense of things? Cite evidence.	
Is the focal student provided opportunities to explain or to present their ideas through extended explanations using academic language?	
Does the focal student use and/or understand the academic words that the teacher uses during instruction? If yes, how so?	
Do student-to-student interactions include students' thinking or wondering about the content? If so, how?	
Is there evidence of explicit linking made between past learning and new concepts introduced?	

ACTIVITY 6: MEETING RECORD – OBSERVATION GUIDE

Date: Type of meeting:
Beginning: Minutes late:
End: Minutes early:
Present: Absent:
Tardies: Early leavers:

Topic(s) of the meeting:

Lower-inference description of proceedings	Higher-inference interpretations:
Narrative:	*Narrative:*

Looking at Student Work and Inter-visitation Debrief

Student Cues	
• Motivation • Peer interaction • Task engagement and Participation • Navigating abstractions • Opportunities to listen and speak • Asking questions (to other students) • Navigating abstraction using resources	
Teacher Moves	
• Questioning • Length of teacher talk • Clarity in providing directions • Assigned Task • Student – Teacher Interaction	
Student Work	
• Work Completion and Quality of artifact • Consistency in procedures • Clearly articulates topic knowledge to domain knowledge connections • Recall of information (less important to salient) • Distinguishes degree of importance in information • Evidence of Academic literacy skills • Student use of EDL strategy taught • Evidence of subject matter content comprehension • Effectiveness of connecting strategy to content	
Group Development	
• Interpersonal Dynamics • Task processing • Group Processing	

Policies or Decisions (adopted by the group)

Memo and Next Steps

ACTIVITY 6: Looking Collaboratively at Student Work and Inter-visitation/Video Observation Debrief Protocol

Observation Debrief Protocol:

1. The observer begins by asking the teacher what he or she thought about the lesson.
   a. What went well? What could have been better?
   b. The observed teacher benefits from self-reflection. At this time, the teacher may also share any thoughts or feelings about the process and make requests—for example, "Please frame all of your cool feedback in the form of questions."
2. The observer picks 2 –3 areas of strength they observed and <u>link these practices to specific ELD strategy and how it connects to the subject matter content</u>. Observer shares those strengths with the teacher—this is warm feedback. Use the observation tool as a guideline, but don't be confined to it. Be very concrete and specific.
   a. For example,
      "When [student A] included the additional evidence after [student B] pointed out where his argument needed to be strengthened, I connected that to the way [ELD strategy] supported their understanding of [content topic].
      "When you said X, students seemed to respond favorable because…"
      "When you did activity X, students appeared engaged because they..."
      "When students did X, it appeared to me that the [ELD strategy] helped the student to understand the [content topic] because…"
3. Feedback is most effective when the receiver invites the feedback. Therefore, the observer asks explicitly for permission to give cool feedback. It is important that the teacher be prepared for the feedback so that she or he can listen openly and without defense, and that the observer gives the feedback with care. Consider the following:
      "I would like to give you feedback on your specific request as well as some of the points mentioned in the learning walk protocol. Are you ready?"
      "I would like to ask some questions about the lesson; can I do that now?"
      "We are both committed to giving our students the best learning opportunities. I have some suggestions that could do just that. Are you ready for me to offer them?"
4. Provide 2 – 3 suggestions or cool feedback around the question: How well did the student understand the concepts/content being taught through the use of language? Be concrete and specific! Good feedback deals clearly with particular incidents and behavior. This section can be interactive, or the observer can give all the feedback at once and then allow the teacher to reflect on what she or he heard.
5. Next, the teacher reflects on (and perhaps also summarizes) the observer's comments, suggestions, and questions. The Host Teacher summarizes the evidence discussed including the connections made to the selected strategy, student cues, teacher moves, and subject matter content. What did you find helpful? Provocative? What would you like to probe further?
6. Facilitator Ask participants, "What are the implications of this work for language and content integration?"
   a) What are possible next steps for the teacher and the focal student?
   b) What else would you like to see in the focal student work? What kinds of adjustments to the implemented strategy could have been done to provide us with this information?

c)   What does this conversation make you think about in terms of your own practice? About teaching and learning in general?

d)   "What was most interesting and might be useful in planning next steps from our conversation?"

Looking at Student Work

I.   DESCRIBING THE WORK (5-10 mins)

    a.   Facilitator asks participants, "What do you see?" Ask participants to state their observations one person at a time around the table until everyone has had at least one turn.

    b.   Note: If a judgment is made then the facilitator asks the participant to identify the evidence that the judgment is based on. Ask, "Can you point to a place in the work that makes you say that?"

II.   INTERPRETING THE STUDENT WORK (5-10 mins)

    a.   Use Looking at Student Work Guide

Inter-visitation (Classroom Visit/Video Observation) Debrief

What should have the student been able to do based on the given task?	What does the work reveal about what the students actually performed?	Teacher moves during the lesson	Student cues contributing to the student work
What aspects of the learning objectives did the student meet? What do the teacher's expectations require students to know and be able to do?	Where in the work do you find gaps? Where in the work do you see insights into student thinking?	What types of moves did the teacher enact during the lesson that can help explain the student work?	What types of student cues or actions occurred during the lesson that contributed to the resulting student work?

    b.   Inquire about what the student does and does not understand; what the student was most interested in; how the student interpreted the assignment. Assume that the work makes sense to the student. Start with:

      • I think…   • They may have been trying to…   • I feel…

   • The student could…   • The student probably…   • The child might…

ACTIVITY 6: Looking at Student Work Organizer Guide

	What should have the student been able to do based on the given task?	What does the work reveal about what the students actually performed?	Teacher moves during the lesson	Student cues contributing to the student work
Student Name	What aspects of the learning objectives did the student meet? What do the teacher's expectations require students to know and be able to do?	Where in the work do you find gaps? Where in the work do you see insights into student thinking?	What types of moves did the teacher enact during the lesson that can help explain the student work?	What types of student cues or actions occurred during the lesson that contributed to the resulting student work?

ACTIVITY 7: MEETING RECORD – OBSERVATION GUIDE

Date: Type of meeting:
Beginning: Minutes late:
End: Minutes early:
Present: Absent:
Tardies: Early leavers:

Topic(s) of the meeting:

Lower-inference description of proceedings	Higher-inference interpretations:
Narrative:	*Narrative:*

End of Cycle Debrief

Content and Subject Matter Integration • Central subject matter concept • Teacher perspective of learning goal • Student perspective of learning goal • Misconceptions and Prior knowledge • Explicit ELD strategies for accessing content • Use of appropriate tasks and materials	
Group Development • Interpersonal Dynamics • Task processing • Group Processing	
Learning Process • Common language • Teacher practice implications • Student learning implications • Change in practice or beliefs • Confidence and Competence	

Policies or Decisions (adopted by the group)

Memo and Next Steps

A Change in Practice

Adapted from NSRF

The purpose of this protocol is to provide a structure for analyzing the process participants have used to make changes in their practice, and for linking that process to Inquiry. This protocol highlights the changes educators constantly make in their practice, and gives them a way to think more systematically about

the questions and data they use to inform those changes. Key to this protocol is the discussion in step 4, when the group talks in such a way that they broaden the presenter's thinking about how s/he generally approaches making changes in his or her practice.

Roles

• A facilitator (who also participates) should be assigned for each round. The facilitator's role is to keep

the conversation moving through each phase and to facilitate the final conversation. The facilitator

should also keep time.

• The presenter shares his or her writing about a change s/he has made in his or her practice. This

becomes the text for professional learning within the group.

Time

 Approximately 55 minutes.

Process

1. Writing (5 minutes)

 Each member of the group writes about a change he has made in his practice, with as much detail as he can muster (see prompts, below). This writing should tell only what happened, like a snapshot. The writing should be crisp and succinct, but it should be clear that the group's discussion will be about what happened, not about the quality of the writing.

 Describe a significant change you have made in your practice:
  • What were you teaching/doing?
  • What change did you make?
  • Why did you think you should make a change? How did you know you should be doing something differently? Was there a question that led to the change?
  • How did you decide what to do? Was there data or evidence of some sort that made you think you should make a change?
  • How did you know whether the change was successful/was working?
  • Who else played a role?
  • Now, what are you wondering about?

The group decides on the order — who will present and facilitate during each round?

2. Presentation (3 minutes)
Presenter either reads the written account of what happened, or tells the story from the writing.

3. Clarifying Questions (2 minutes)
Colleagues ask clarifying questions.

4. Discussion (5 minutes)
The group talks about what they heard the presenter say. In this conversation, the group talks about which gears (or parts of the inquiry cycle) seemed to be engaged in the change process as described by the presenter, the relationship between the parts of the inquiry cycle from the story, and what the presenter could do next. The goal here is for the presenter to leave with a greater understanding of how s/he approaches making changes in his or her practice, and to link this process to more formal "inquiry." (The presenter listens and takes notes.)

5. Repeat Each Round (45 Minutes) 15 mins per person.

6. Reflection (5 minutes)
A useful question at this stage might be, "What new insights occurred for all of us?"

7. Debrief (2 minutes)
Debrief the process. The group talks about what just happened. How did the process work?

ACTIVITY 8
Plenary Session

Reflection Questions:

What advice would you give other teachers when planning and using the student-student interaction strategy that you tried with your group? (conversation carousel, fishbowl, gallery walk).	
What did you learn about your focal student? How does this help you think about other students in your class?	
What did you learn about your own teaching practice?	
From this experience, how would you now articulate or explain "language and content integration"?	

PRESENTING TEACHERS INTERVIEW PROTOCOL

- Why did you volunteer to be a presenting teacher? What motivated you to share your practice with the team?
- What did you get from the experience?
  Probe:
  - What changes would you make if I were to engage in this process again?
  - Did this process reveal any aspects of your practice that would benefit from a more focused support?
  - What changes would you make if you were to teach this unit/lesson again to the same group of students?
- What "worked" particularly well during your unit/lesson?
  Probe:
  - Were there any small-group activities, assignments, or teaching strategies that promote student-student interaction that you think you should share with other teachers?
  - To what extent did you and your students meet your instructional goals of student-student interaction to talk about the content in your class?
  - What evidence helps you to know?

FOCAL STUDENT INTERVIEW QUESTIONS

How did you like the conversation carousel activity you did in your class (Math, Social Studies, English)?

What did you learn from that activity in your math class? In your social studies class? In your English class?

Where do you get stuck when you don't understand the English in your classes?

How do you get to practice your English in your classes?

How does the teacher help you understand what you need to learn in your class?

How does the teacher help you use more English in your class to understand better what you need to know about your class?

How does talking to other students help you learn what you need to know in your classes

How does talking to other students help you speak more English to understand what you are learning in your classes?