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Effect of Class Size on Teaching Middle School English Language Learners

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Signature Sheet

This thesis, written under the direction of the candidate's thesis advisor and approved by the department chair, has been presented to and accepted by the Department of Education in partial fulfillment of the requirement for the degree of Master of Science in Education. The content and research methodologies presented in this work represent the work of the candidate alone.

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Abstract

Class size is an issue in American K-12 education that researchers have examined and debated for years. Documented research studies conducted on the impact of class size on student achievement have not come to concrete conclusions due to the minimal influence of federal class size reduction programs throughout the United States. Furthermore, despite the vast body of literature concerning the class size and its impact on student achievement, focusing primarily on students in the elementary grades, there is a distinct lack of scholarship focusing on the effect of class size on teaching English Language Learners (ELL) and attempt to fill this gap in the research literature. A qualitative research design was used to collect data from a sample from teachers currently employed in one Bay Area school district for this study. The results of the study suggested that class size did play a role in and affected the teaching of ELL students in large mainstream academic classrooms. In particular, this study indicated that certain elements of teaching, such as pacing and individualized student attention are affected.

Chapter 1 Introduction

Reflecting on my time last year as a student teacher, I find myself thinking back to some of my first semester observations in a 32-student sophomore English class. As I sat there observing direct instruction and students taking Cornell notes, I saw Carlos staring blankly at the paper on his desk, playing with his pencil, and demonstrating signs of being completely disengaged. Carlos was one of the three intermediate level English Language Learning students in the class who needed constant attention, differentiated instruction, and extra help. Since this fifth period was one of the larger and more demanding classes, Carlos in particular seemed to fall through the cracks.

As a first-year credentialed teacher in the state of California, having gone through classroom observations, student teaching ninth grade English as well as the English Language Development (ELD) Language Workshop, and now teaching classes of my own in both seventh grade English and English as a Second Language (ESL), I have experienced different schools, met numerous teachers, and encountered various classes of different size—the smallest being eight and the larges being approximately 45 students in a single classroom. Furthermore, in addition to the number of students per classroom, I have witnessed a range of student behavior, engagement, and achievement. My primary goal as an educator is to provide all of my students with the essential tools necessary in order for them to be successful in their academic careers.

According to the California Department of Education site, California Code (EC) sections 41376 and 41378, the average number of students per class in grades four through eight should not exceed 29.9 students. In fact, Title 5, section 15100-15112 in the California Code of Regulations explains that the penalty for exceeding the limit of students per class/teacher means a loss in funding for each student over the limit; therefore, school districts that choose to increase

these limits must submit waiver requests to the State Board of Education. This determined whether or not the penalty for surpassing the limit will be adjusted (http://www.cde.ca.gov/fg/aa/pa/cefcsp.asp). Chingos (2013) adds that schools all across the country are facing budgetary pressures as such that have neither been seen nor heard of in years and explains:

> A 2007 poll of the American public found that 77 percent of respondents thought that additional educational dollars should be spent on smaller classes rather than higher teacher salaries … The same 2007 survey found that fully 81 percent of public school employees preferred an improvement in a working condition—class size—than an increase in salary. (2013, p. 412-413)

Definition of Terms

English language learner (ELL). An English language learner is not necessarily a student who speaks more than one language. An ELL is a student whose native language is something other than English and/or someone who is either learning English or is not entirely "proficient" in the English language. English learners' proficiency can be measured through the CELDT (California English Language Development Test), which can focus on "listening and speaking, reading and writing" and consists of five level scores—beginning (1), early intermediate (2), intermediate (3), early advanced (4), and advanced (5) (Jepsen & de Alth 2005).

Class-size reduction (CSR). Class-Size Reduction is an educational approach and reform, which has been attempted and implemented in several states throughout the country. Dependent on district-wide policy and budgetary situation, the purpose of CSR is to essentially improve student performance and achievement by decreasing the amount of students per teacher, allowing for there to be more individualized teacher-student attention (Chingos 2013).

Effective teacher. An effective teacher is someone who is able to help the progression of students' learning and achievement in the classroom as well as on standardized assessments through providing students with the necessary and appropriate resources along with highly engaging, mentally stimulating and differentiated material. An effective teacher holds students accountable for their own learning and makes them feel that they are equally as capable as any other student by setting the same high standards for all students. It's someone who contributes not only to their academic progress, but also to various aspects of students' social and behavioral progress through the implementation and emphasis of rules and values that contribute to the safe and positive classroom and school-wide environment. Finally, an effective teacher is willing to collaborate, working with others to ensure that all students are receiving the help and support necessary to succeed (Goe, Bell & Little, 2008).

Differentiated instruction. Differentiated instruction/differentiation is a way of teaching that consists of numerous different techniques and scaffolding methods essential to ensure the success of all students. The purpose of differentiation in a classroom is for teachers to acknowledge and be aware of the differences among students in regards to their personalities and backgrounds as well as learning styles and abilities in order to develop and apply the appropriate lessons and strategies (Hall, Strangman & Meyer, 2003).

Statement of the Problem

Classroom size is an issue in American K-12 public education that has been discussed and researched for years. The California Department of Education data from fall 2014 shows that 22.3 percent of the students enrolled in public California schools were ELL in one of the following settings—"Structured English Immersion" (SEI), "English Language Mainstream" (ELM) or "Alternative Programs" (Alt.) (http://www.cde.ca.gov/ds/sd/cb/cefelfacts.asp).

Numerous research studies focused on elementary school grade levels have been conducted on class size and its impact on student achievement (e.g. Bosworth, 2014; Fidler, 2001; Olson, 1999; Vaag Iversen & Bonesronning, 2013). However, the literature seems to reveal a distinct lack of scholarship regarding the effect of class size on teaching ELL students effectively. This study attempts to fill this gap in the research literature.

Statement of Purpose

The purpose of this study is to closely examine and understand how class size affects teaching effectiveness for ELL students in mainstream seventh and eighth grade academic classrooms, including the quality of delivered instruction, time management, providing every ELL student with timely and useful feedback, classroom management, and student-teacher rapport.

Research Question

How does class size affect the effectiveness of teachers of seventh and eighth grade ELL students placed in mainstream academic classrooms in one Northern California school district?

Theoretical Rationale

Theory of differentiated instruction.

Differentiation in a classroom is made up of numerous aspects and strategies. Hall, Strangman and Meyer (2003) define differentiated instruction as an educational approach which recognizes diverse students as individuals with distinct learning styles. Therefore, providing all students with the same curriculum in a variety of ways. Curriculum is adapted in order to meet the learning needs of each individual. Differentiated instruction is an academic framework promoting and assisting with effective teaching. It’s a way of teaching that reaches all students—regardless of their distinct backgrounds—by observing, examining and ultimately gaining a

strong understanding of both the similarities and differences among students, and using this information as a guiding tool when planning, preparing, and differentiating instruction.

"Differentiated instruction is an instructional process that has excellent potential to positively impact learning by offering teachers a means to provide instruction to a range of students in today's classroom situation" (Hall et al., 2003, p. 6). Differentiation and teaching in general involves incessant reflection and effort to improve and progress. Teaching is an art and process that is never truly "perfect." There is always more to be done, updated and improved on. The purpose and goal of differentiation is not to provide different students with different material, but rather to provide all students with the same material using a range of different strategies and approaches, making that material and instruction accessible to everyone. Thus, providing students with the most effective teaching possible.

It's crucial to remember that differentiation is not meant only for ELL students or students with other special needs. Differentiation does not take away from anyone, but simply adapts and scaffolds for everyone. Tomlinson (2001) hones in on three key elements of curriculum instruction in which differentiation is essential: "content, process, and products" (2001, p. 51).

In addition to the three key elements is the following set of guidelines:

Clarify key concepts and generalizations

Use assessment as a teaching tool to extend rather than merely measure instruction

Emphasize critical and creative thinking as a goal in lesson design

Engaging all learners is essential

Ensure the balance between tasks that are assigned to students and student choice. (Tomlinson, 2001)

Differentiation, although possible in every class, isn't always easy. It's an art which requires teachers to put in time in order to be fully aware of each student's individual level of understanding, comfort and interest. For this, there are numerous strategies that can be put into place, such as implementing group work and/or project based learning—allowing students the opportunity of being challenged, while at the same time teaching them to work together and collaborate in order to problem solve. Students must also be given the opportunity to make choices regarding certain areas of their education—reassuring them that education is entirely for their benefit, rather than making them feel as though everything is simply being forced upon them. In order to do this, they must understand the "Why" and "How." Students must understand why they are being taught or made to do something and how it is relevant to their lives in order for them to be interested, and thus, engaged. Furthermore, continually assessing students, whether it be diagnostic, formative, or summative assessments, is just as significant as other strategies because it provides an insight as to what needs to be covered or reviewed.

Classroom and school populations across the United States have shifted throughout the years. Tomlinson (2001) explains:

> They come from differing cultures and have different learning styles. They arrive at school with differing levels of emotional and social maturity. Their interests differ greatly, both in topic and intensity. At any given time, they reflect differing levels of academic readiness in various subjects—and in facets of a single subject. And to complicate things even further, readiness and interests can vary for a given student over time and depending on the subject matter (2001, p. vii)

Due to the increase in diversity among today's student population, it has become an essential part of teaching to differentiate, taking into account students' diverse learning needs

and styles in order to provide them with the necessary support and tools to succeed academically. Among the diverse populations of students are varied levels of ELL students for whom the differentiation of instruction plays a huge role, especially in larger mainstream classes.

Assumptions

This study assumed that the sample of classrooms with ELL students were representative of all the ELL students in the district. The study also assumed that the teachers in the sample of classrooms participating in this study all had the same amount of experience dealing with large numbers of students in a classroom.

Background and Need

Despite the numerous research studies and cast body of literature concerning the impact of class size on the achievement of students in the lower levels, past research studies conducted have not come to any concrete conclusions other than class size and class size reduction programs having had minimal or no impact on student achievement. Many of these studies have specifically focused on the fluctuations of standardized test scores or their lack thereof after the implementation of CSR programs in several states throughout the United States (Stecher et al., 2001; Jepsen & Rivkin, 2009). Class size is an issue that has been questioned and examined for decades. It does as far back as the early 1900s. "Urban classrooms had between 40 and 48 desks per room, accommodating up to 60 students … To staff these crowded classroom, teachers had to be found who could survive and stay" (Cuban 1993, p. 30-31). Not only were teachers whose education did not surpass high school expected to teach these large amounts of students in a single classroom, but it was also expected that they teach as many as ten different subjects on a daily basis.

Meanwhile, when Senate Bill (S.B.) 1777 was passed by California legislature in July of 1996, it resulted in "… an education reform initiative that committed more than $1 billion a year to a class-size reduction (CSR) program of unexpected magnitude" (Strecher et al., 2001, p. 670). Inspired by the CSR implemented in Tennessee's project STAR (student teacher achievement ratio) and Wisconsin's SAGE project (student achievement guarantee in education), this program too began by focusing on reducing the "student-teacher ratio" in the elementary grade levels. However, research implies that CSR programs have little or even no impact on student achievement, let along teacher effectiveness. The increase in ELL among the student population in schools in addition to the deficiency in scholarship examining how class size affects, not only students, but also the teaching of ELL students in academic classes created a need for this study.

Summary

Classroom size and its impact and affect in education is a subject that has been researched for over a century. While there is plenty of literature focusing on class size's impact on student achievement through the focus on CSR programs, the results have not shown concrete evidence of significant impacts. This research study explores the effect of class size on teacher effectiveness for ELL students in seventh and eighth grade classrooms.

Chapter 2 Review of the Literature

Introduction

This section is an examination of the research literature on how class size affects teaching effectiveness for seventh and eighth grade ELL students in mainstream academic classrooms. Information was gathered from academic library searches using online resources, reviewing scholarship from the early 1900s up to 2015. The research scholarship is organized in the following categories: Historical Context and Review of Academic Literature.

Historical Context

Some of the earliest studies in which class size was examined as a key factor took place during the early 1900s. Rice (1902) analyzed the scores of an arithmetic test from elementary and middle school classes and found there to be no significant distinction in student achievement among small or larger class sizes. Elliott (1914) examined the "variation in achievement" of students in grades five and seven, focusing on "arithmetic, English composition, spelling, handwriting, and range of vocabulary" (1914, p. 1). His own research consisted of an in depth exploration of America's increase in class size during the late 1700s and early 1800s, during which elements such as budget was as prevalent as it is today. He concluded that smaller class sizes appear to be less influential in grade seven and "the most successful in grade five" (1914, p. 108). Later, Davis and Goldizen (1930) conducted a study, which honed in on class size and its impact on students in junior high history classes through separation of students into different groups, concluding that the larger section did not necessarily have a disadvantage simply because of its size (1930, p. 366).

However, despite earlier studies being inconclusive and showing little to no impact on student achievement, in the latter half of the 1900s, especially after World War II, the question of

class size and whether or not its impact on education and achievement was truly significant enough to implement CSR, vastly rose (Fleming, Toutant & Raptis, 2002).

Review of Academic Literature

Class size effect on students in secondary academic classrooms.

California's original implementation of a very expensive CSR program occurred in 1996 as a reform meant to improve achievement of students in grades K-3, thus aiming to ultimately improve student performance in the secondary grade levels. Gilstrap (2003) examined the role that class size has on the achievement of students through the observation and analysis of twenty middle schools and fifty-five ELA (English Language Arts) classrooms. "The present study sought to examine potential effects of reducing class size in eighth grade language arts classrooms by observing characteristics of teaching practice and student achievement gains in small and large classrooms" (2003, p. 9). In accordance with the data collected, the study found that there was in fact a correlation between the implementation of CSR and student achievement in LAUSD (Los Angeles Unified School District), taking into account that the scores among the reduced eighth grade ELA classrooms improved and surpassed those whose classes had not been affected by CSR. However, additional research could include focus and observation on all middle school levels, including sixth and seventh as well as core curricular subjects, such as math, social studies and science.

Pong and Pallas (2001) looked into class size and student achievement in eighth grade math classes among different nations, "Australia, Canada, France, Germany, Hong Kong, Korea, Iceland, Singapore, and the United States" (2001, p. 251). Researchers found that the United States seemed to be the only nation to benefit from the effects of small classes, specifically in math, through the use of four indicators in this study, 1) small group measured by frequency with

which students are engaged in small group activities, 2) individual work, measured by the frequency by which students engage in individual work with teacher assistance, 3) whole class teaching, measured by the frequency of teachers conducting in a whole class setting, 4) class discussion, measured by frequency in which students are engaged in discussions about their homework (2001, p. 258). Class size in the United States has and continued to rise since the 1990s, particularly in elementary schools. As a result, throughout the past decades, there has been a growing number of action recommendations (CSR programs), so as to reduce this high number in primary grade level classes.

Due to inconclusive results concerning the impact of class size on student achievement, McArver (2015) inquires further and examines the possible relationship between class size and student achievement in Texas mathematics classes, grades seven to nine. In the state of Texas, class size is limited to twenty-two students in Kindergarten, grades one, two, three and four. Whereas class size in grades five, six, seven and eight is limited to twenty-eight students. In fact, similarly to California, districts must not surpass this limit before requesting and receiving an approved waiver permitting them to do so, and in 2011, the amount of waivers to exceed the set class size limit quickly began to rise (Education Week, p. 4). Through "tracking" of participants' academic data, such as grades and scores on the "mathematics Texas Assessment of Knowledge and Skills exam" (TAKS)—from the time they were in grade seven and up until they reached grade nine—the researcher measured achievement and found that there was a significant connection between class size and the achievement of students.

Despite having taken place in different areas, these studies all agree that class size seems to impact and has shown to have some effect on student achievement. Gilstrap (2003) and McArver (2015) both concluded that there was an evident and "significant relationship" between

class size and achievement in mainstream academic classes through the examination and analysis of academic data, such as grades and test scores. Nonetheless, Gilstrap (2003) as well as Pong and Pallas (2001), both briefly discuss the budgetary restraints that hinder CSR processes throughout the district(s) and note that despite its significant correlation, class size is only one of the several elements that play a role in the achievement of students in secondary English and mathematics classes.

Class size impact on student achievement.

Khazaei, Zadeh and Ketabi (2012) explored the impact of class size on students who were learning a second language. This was tested by having three different class sizes, Group A (5), Group B (10), and Group C (15). For a period of six weeks, the total amount of time each student spoke in class was recorded, and having employed ANOVA (analysis of variance) provided them with descriptive statistics (mean and standard differentiation) on each student's turn taking and talk time, also known as "willingness to communicate" (WTC). Ultimately, researchers found a substantial effect on the students' WTC as class size increased, consequently impacting their achievement in the classes.

Blatchford, Goldstein, Marin and Browne (2002) investigated the correlation between class size and student achievement. They assess whether or not the effects of class size truly exist through the examination of student achievement on entry and exit assessments throughout different class sizes as well as the variation in the characteristics of students being enrolled and attending schools (2002, p. 172). Gathered data showed that with an increase in class size, there was a subsequent decrease in literacy scores (2002, p. 174). Furthermore, researchers concluded that smaller class sizes showed a positive impact for some children, specifically focusing on

underprivileged or "minority" children (2002, p. 173). The results supported the theory of smaller class size increasing student achievement.

Harfitt (2011) examined the "why" and "how" in regards to the impact of class size on the learning and performance of students in secondary English classes in Hong Kong. "The popular issue of class size is something that in the city of Hong Kong is continuously debated, whether or not the learning and performance of students currently in class sizes of forty-plus students would improve when being placed in classes where the number of students is reduced (2011, p. 299). In addition to three different case studies, data is also obtained through observations and interviews. This study does something that is unlike the rest of the scholarly sources, it captures the student voice through obtaining valuable information and perspectives from those whom this issue is said to affect that is, the students. The in-depth analysis of the collected data suggested that "the smaller classes in this study appeared to alleviate students' anxiety about learning subjects like English language, recognized as socially important" (2011, p. 306). The researcher concluded that students perceive smaller class sizes as less stressful, thus enhancing student participation, one-on-one teacher attention, learning ability, and overall performance.

Ferguson (1991) took a deeper look at equity in primary and secondary public schools with regard to resources due to the shortage of research studies addressing this aspect. Using data from a study of approximately 900 public Texas school districts consisting of more than 2.4 million enrolled and attending students, the researcher looks at three different elements that play a role in an equitable school environment, "(1) determinants of student test scores, (2) factors that influence which districts attract the most effective teachers, and (3) how and why money matters" (1991, p. 45). Although results concerning equity in general remain somewhat complex,

the researcher did find a correlation between class size and student achievement among the districts. In fact, results showed that as the number of students increased over eighteen, achievement of students within the district decreased.

Class-size reduction impact on student achievement.

Nye, Hedge, and Konstantopoulos (1985), examine the impact of class size, on a larger scale through a four-year experiment conducted in the State of Tennessee. According to Mosteller (1995), "The Tennessee class size project is a three-phase study designed to determine the impact of smaller class size in the earliest grades on short-term and long-term pupil performance" (1995, p. 113). The lack of definitive conclusions from studies conducted in decades prior to Tennessee's Project STAR, urged the development and implementation of a state-wide project such as this, to answer the question as to whether or not class size somehow impacts student achievement and whether or not addressing any class size issue beginning in the early grade levels would somehow affect students' academic performance throughout their secondary education, specifically focusing on math and reading (1985, p. 126). After careful analysis, Nye, Hedge and Konstantopoulos (1985) concluded that class size plays a role significant enough for there to be a policy change in regards to the possible implementation of CSR programs, suggesting that being in smaller classes throughout the primary grades could lead to higher academic achievement later on.

Halbach and Ehrle (2001) described Wisconsin's SAGE Project as "a statewide effort initiated in 1996 to increase the academic achievement of students living in economically disadvantaged circumstances by reducing class size to 15 students" (2001, p. 32). Similarly to Tennessee's Project STAR, Wisconsin's SAGE Project hypothesized that inserting student into smaller class sizes beginning in the early grades raised the odds of those same students reaching

higher academic achievement throughout the secondary grade levels, middle and high school. According to Molnar et al. (1999), "Results of the 1996-97 and 1997-98 first grade data revealed finding consistent with the Tennessee STAR class size experiment" (1999, p. 165). Results showed that with the implementation of SAGE, there was a decrease in disciplinary issues in the classrooms, allocating more time for individualized student attention, the development of variation in teaching strategies, and more in depth content instruction in general, boosting student achievement.

Chingos (2012) examined the impact of Florida's 2004 CSR mandate, adjusting "their state constitution to set universal caps on class size in elementary and secondary schools" (2012, p. 545). In the past couple of decades, since Indiana's 1981 pilot program, 24 U.S. states have taken part in some sort of CSR (Education Commission od the States, 2005). Due to the increase in student achievement happening, not only after, but also prior to Florida's CSR implementation, Chingos (2012) takes a comparative approach to identify possible impacts on student achievement, evaluating the CSR policy in place on two different levels, district and school-wide. Through his detailed investigation and analysis of both levels, this researcher concluded that Florida's implemented CSR had minimal to no impact on the achievement of students in public schools.

Summary

Despite years of continuous research on class size and its impacts, past literature on previously conducted research has focused primarily on student achievement, and not so much on teaching effectiveness. Furthermore, although research has examined class size and its impact throughout K-12 education, the focus on primary grade levels has been prevalent. Hence the

significance of this study, which focused on the teaching effectiveness of ELL students in middle school grades.

Chapter 3 Method

Research Approach

According to Creswell (2014), "Purposeful sampling, collection of open-ended data, analysis of text or pictures, representation of information in figures and tables, and personal interpretation of the findings all inform qualitative method" (2014, p. 24). Unlike quantitative methods which deal with the analysis of numeric data, a qualitative research approach goes about collecting data by examining the "why" and "how" through observations and interviews that take place where participants encounter the problem being researched, ultimately going through collected data through "inductive and deductive data analysis." Creswell (2014) explains:

> This inductive process illustrates working back and forth between the themes and the database until the researchers have established a comprehensive set of themes. Then deductively, the researchers look back at their data from the themes to determine if more evidence can support each theme or whether they need to gather additional information. (2014, p. 234)

The researcher must look at the issue being examined reflectively and holistically in order to identify and determine key themes.

Creswell (2014) defines qualitative interviews, whether it be face-to-face, telephone, group or online, as involving unstructured and generally open-ended questions that are few in number and intended to elicit views and opinions from the participants (2014, p. 239-40). This interview methodology allows the researcher to possess control over the line of inquiry and provides the researcher with the opportunity to gain a more in-depth understanding. In order to conduct a proper interview, interview protocol—"a form used by a qualitative researcher for

recording and writing down information obtained during an interview" (2014, p. 292)—must be well developed and used throughout each interview.

This study uses a qualitative method approach to explore the effect of classroom size on the effectiveness of teaching ELL students in English, social studies, math, and science classes. This study relies on the recorded and transcribed interview responses of eight public middle school teachers in one Bay Area school district, giving the researcher the opportunity to look for more in-depth information from the teachers themselves, taking into account the experience of teachers who teach grades seven and eight (two English teachers, two social studies teachers, two math teachers, and two science teachers—one seventh grade and one eighth for each subject area). A qualitative approach using in-depth interviews provided the researcher with not only the prospect of an applied methodological fit, but also the opportunity to gain a much more profound insight into the daily experiences of a diverse group of middle school teachers.

Ethical Standards

This paper adheres to the ethical standards for protection of human subjects of the American Psychological Association (2010). A research proposal was submitted and reviewed by the Dominican University of California Institute Review Board for the Protection of Human Subjects (IRBPHS), approved and assigned number 10428. Written consent was obtained from all participants via a consent form (Appendix C). All participants were advised of the voluntary, unpaid nature of their participation, and assured of data security, and the confidentiality, anonymity of their participation. In addition, all participants were advised of their right to withdraw from this study at any time.

Sample and Site

This study took place at a suburban middle school setting in a Bay Area school district

and consisted of eight teacher participants, four seventh grade and four eighth grade teachers of academic classes.

Teacher A has been teaching for seventeen years. Her first two years teaching wee in an elementary school and the rest have been in middle school. She obtained her Bachelor's degree in speech communication and has multiple credentials, including her multiple subject credential; single subject credentials in English, physical education, and a Crosscultural, Language, and Academic Development (CLAD) add-on. She is currently teaching full-time, with one period of dance and the rest, seventh grade English. Her smallest class is twenty-two students and her largest is twenty-six, having between five and ten ELL students in each class.

Teacher B has been teaching for nineteen years, all in middle school. She possesses a Bachelor's degree and single subject credential in English. She currently teaches full-time as an eighth grade English teacher. Her largest class has thirty-five students and her smallest has twenty-three, five of those students being ELL.

Teacher C has been teaching for fifteen years. His first teaching position was finishing off the year as a long-term substitute teacher at a high school, and the rest has been as a full-time teacher in middle school. He has a Bachelor's degree in history and a single subject credential in social studies. He currently teaches seventh grade world history. His smallest class consists of twenty-four students and his largest consists of thirty-eight, fifteen percent of those being ELL students.

Teacher D has been teaching for twenty-two years, all in middle school. She possesses a Bachelor's degree in history and a single subject credential in social studies. She teaches full-time as an eighth grade U.S. history teacher, her smallest class consisting of twenty-eight

students and her largest class consisting of forty, thirty percent of each class being made up of ELL students.

This is Teacher E's first year teaching. He obtained a Bachelor's degree in economics and a single subject credential in mathematics. He is currently teaching seventh grade math full-time. His smallest class has twenty-six students and his largest class has thirty-three, twenty-five percent of each class being made up of ELL students.

Teacher F has been teaching for twenty-one years. She started out teaching elementary school and then moved to middle school, where she has remained. She has a Bachelor's degree in mathematics and obtained her multiple subject credential as well as a supplemental credential in mathematics. She is currently teaching eighth grade Common Core mathematics full-time. Her smallest class has twenty-five students and her largest has thirty-two, fifteen percent of her students being ELL.

Teacher G has been teaching for twenty-five years, all in middle school. She possesses a Bachelor's degree in biology, a multiple subject credential, and supplementary authorizations in English, science, and health science. She is currently a full-time seventh grade health science teacher. Her smallest class has twenty-nine students and her largest has thirty-six, ten of her students being ELL.

Teacher H has been teaching for twenty years, all in middle school. She possesses a Bachelor's degree in biology as well as a single subject credential in science and a supplementary credential in chemistry. She is currently working full-time teaching eighth grade science as well as one period of seventh grade science. Her smallest class consists of twenty-five students and her largest one of thirty-two, eight of her students being ELL.

Access and Permissions

After being contacted via e-mail, written consent was obtained from the principal via a consent form (Appendix A) during a face-to-face conference. All participants were contacted via e-mail, seeking their participation in this study. All participants were provided with a cover letter (Appendix B) as well as a Participants Bill of Rights (Appendix D), and written consent was obtained from participants via a consent form (Appendix C).

Data Gathering Procedures

Data was collected at the staff lounge, in the school site where each of the eight teacher participants (four seventh grade and four eighth grade) worked. Proper interview protocol was developed and used as described by Creswell (2014, p. 244). The first ten minutes of interview time was used to establish rapport with participants. A script was used at the beginning and end of each teacher interview, reminding teachers of the voluntary nature of their participation in this research study as well as how responses would remain anonymous and completely confidential. Once transcribed, all participants were provided with the transcription of their interview and were also apprised of their right to make any changes or omissions to their responses. The entire interview was recorded with each participant. Before the more in-depth interview questions were presented, participants were asked the following demographic questions:

1. How long have you been teaching?
2. Has your entire teaching career been in a middle school?
3. How many students do you have in your smallest class?
4. How many students do you have in your largest class?
5. How many ELL students make up your student population?
6. Do you possess multiple degrees? If yes, which one(s)?

7. Do you possess multiple credentials? If yes, which one(s)?

8. Have your class sizes ranged throughout the years? Have you seen them change?

Following the demographic questions, participants were asked the following five primary questions and one follow-up question as listed below:

1. Do you experience any challenges when teaching ELL students in your classroom? Why, or why not? If yes, how do you address these challenges?

2. Do you differentiate instruction for your ELL students? Why, or why not? If yes, how?

3. What instructional methods and/or strategies work better for you with the ELL students in your classroom? What methods and strategies don't work well with the ELL students in your classroom?

4. Do you experience any challenges with grading and providing feedback for all the students in your classroom? Are there particular challenges with grading and providing feedback for your ELL students?

5. How do you build rapport with all the students in your classroom? Do you do anything specific to build rapport with your ELL students?

   Follow-up question: Do you think that building rapport with the ELL students in your classroom is affected by the number of all/ELL students in your classroom? Why, or why not?

The follow-up question was asked after question five only. Primary and follow-up questions inquired about the experiences of the teachers, perspectives and awareness of the effects of class size on teaching effectiveness for the seventh and eighth grade ELL students in their academic classrooms. All of the same questions were asked in the exact same order to each participant and the interview was recorded from the beginning of the first demographic question to the end of the last question. The last five minutes of the interview was used to close out each respective interview, for thanking the participant, and acknowledging the time spent responding.

Data Analysis Approach

Each of the audio tape-recorded interviews were listened to, and carefully transcribed by

the researcher. Subsequently, each interview transcription was uploaded onto the MAXQDA qualitative data analysis software where the researcher then thoroughly read through each interview transcription, examining and dissecting each of the participant's responses, question by question. Through the process of refining the transcribed responses into distinctions and similarities among the two different grade levels for each academic subject, the researcher created and assigned new codes, using different colors as identifiers per the MAXQDA software. Identified sections were thus highlighted and moved to its corresponding coded section. Each code and its corresponding selected segments were further broken down, using which, the researcher identified common themes and significant distinctions among the totality of the participant responses.

Chapter 4 Findings

This study was ultimately focused on determining how class size affected teacher effectiveness, specifically when teaching ELL students in mainstream academic English, social studies, mathematics, and science classrooms. This study was carried out at a suburban Bay Area middle school, and the participants included eight middle school teachers—two teachers per academic subject, one seventh and one eighth grade for each. Data collected for the purpose of this study consisted of participants' demographic information as well as in-depth recorded interview responses through which participants shared their struggles and experiences about the various effects of class size.

Primary Themes from the Data

Five primary themes emerged from the data using the MAXQDA software coding, refining, collating, and generating process of iteration. The five themes are presented as follows:

Pace is affected by class size and the number of ell students.

All eight participating teachers interviewed brought up the affect that the number of ELL students in a larger class size had on the pacing of instruction in their classrooms. The researcher found that various elements of class size affected pacing. With a larger class size, the odds of dealing with classroom management issues increase, the number of ELL students needing extra help and explanation as well as the number of fluent English-speaking students whose struggles are not language, but rather literacy and comprehension related may shift that pacing and affect what gets done.

Large classes limit the amount of individual time given to each student.

All eight participating teachers expressed that with larger class sizes also comes a limited amount of time that a teacher can provide each individual student with. Through the conducted

interviews, the researcher found that the more students there are in a class, the less time there is to provide each individual student with that necessary teacher-student attention, especially with forty to fifty minute class periods.

Technology is a useful tool for ELL students in a large class.

All eight participating teachers agreed that technology has been a useful tool in general, but found it to be particularly helpful with the ELL students in the classroom. The researcher found that technological resources such Chrome books, audiobooks, videos, PowerPoint, along with others, enhance student opportunity to facilitate taking in the content and gain as much understanding as possible.

Think-pair-share is a useful strategy for ELL students in a large class.

All right participating teachers addressed their use of "think-pair-share" as differentiation for ELL students in their classrooms. The researcher found that among the numerous differentiation strategies, "think-pair-share" is one that provides students, especially ELL students, with a voice and the opportunity to enhance their confidence when speaking in front of a class.

"Buddying" ell students with other students.

Seven of the eight participating teachers discussed the concept of "buddying up" ELL students with "stronger" students in the class, regardless of whether the ELL students are at the beginning or advanced level. Through the conducted interviews, the researcher found that the partnering of ELL students, regardless of their proficiency level, is a "go to" strategy for numerous teachers, it is also a controversial strategy that can either go very well or awry due to the extent of student involvement on both ends, the student "peer tutoring" and the student being "peer tutored."

Analysis and Discussion of the Primary Themes

Pace is affected by class size and the number of ell students.

According to all participating teachers being interviewed, the number of ELL students in a larger class size does actually affect the pacing on instruction. In fact, Teacher A commented, "Being aware of your EL students' needs also means finding an adequate pace to ensure that all students are grasping what's being presented to them." There are different types of students, each having their own learning style and speed. With the rise of Common Core, there is also a rise in the emphasis on language, analysis and explanation. Teacher E explained, "It's challenging because with the Common Core, it's not so much, here's your answer, but rather, here's the answer: how did you get it and why, or how do you know?" There are ELL students whose verbal BICS (Basic Interpersonal Communication Skills) may conceal their CALP (Cognitive Academic Language Proficiency), especially when honing in on reading and writing skills. This makes the pace of a classroom a crucial component concerning the progress of ELL students in larger class sizes. Therefore, the rise in these academic standards, in addition to class size and the number of ELL students, affect the pacing of instruction in mainstream English, social studies, math and science classes.

Large classes limit the amount of individual time given to each student.

All participating teachers being interviewed claimed that larger class sizes limit the amount of time that a teacher can provide to each individual student. According to Teacher B, "You only get so much time per class period, and the more students there are, the less amount of time you have to work with individual students." All students, regardless of their fluency in English, have their own individual struggles and needs. However, when dealing with ELL students whose struggles derive from language, more time is spent helping and explaining the

content to them, leaving less time to help other students, or vice versa. Furthermore, with larger classes there are also classroom management issues that come into play, taking away from that necessary individual student-teacher time. Thus, when there is a large class size and less than an hour per class period, it is difficult for teachers to provide each and every student in their classes, including ELL students, with the necessary individual help with their distinct struggles in mainstream English, social studies, math and science classes.

Technology is a useful tool for ell students in a large class.

The subject of technology was one that was continually brought up and discussed by all participating teachers being interviewed, explaining that the rise of technology has proven to be a useful tool in any class, but has been particularly helpful with the ELL students in their classrooms. In fact, Teacher D expressed, "Thank God for things like Google slides and other technology. It has really helped out with visuals and stuff like that, which I've been able to bring in, especially with history being such a language-heavy class." Likewise, Teacher G asserted, "Technology is a huge component in helping EL's, especially those whose English just isn't there. They can use their phones or, now, the Chrome books to translate, for example." In mainstream English, another text and language-dominant class, students are provided with access to some of their texts as audiobooks, allowing them to be able to listen as they read. Being that the rise of the Common Core is creating a language-dominant environment in all academic classes, it has become not only good teaching, but necessary teaching to teach with visuals and to provide additional opportunities for students to access the information. Each individual student has their own learning style, whether it be auditory, visual, kinesthetic, or a mixture. Therefore, presenting curriculum with academic language in an auditory manner only, for example, will not get the desired result with all students. Being that individual attention time for students in a

larger classroom is constrained, the incorporation of technology helps relieve some of that difficulty, particularly for ELL students.

Think-pair-share is a useful strategy got ell students in a large class.

The use of "think-pair-share" as a differentiation strategy for ELL students in the classroom is something that all participating teachers addressed throughout their interviews. For instance, Teacher B stated, "I like to do a lot of think-pair-share with those kids. It allows them to practice with each other in case they're worried about what to say in front of the rest of the class if they're called on." Teacher F added, "Being in a large class is intimidating, especially when there's a language issue. Think-pair-share lets them express their ideas with one person, rather than thirty others, and then sharing as a pair, rather than alone." Being called on and answering questions or expressing thoughts in front of an entire class can be intimidating for fluent English-speaking students and higher level ELL students, but for ELL students whose language abilities are minimal. There is not only the concern of getting something wrong, but also saying or pronouncing something incorrectly. Think-pair-share is a useful tool that can help enhance the success for all students, especially ELL students in a large mainstream academic classroom.

"Buddying" ELL students with other students.

Out of the eight participating teachers being interviewed, seven of them addressed their use of "buddying" ELL students—regardless of whether the ELL students are at the beginning or advanced level—up with "stronger" students in the class as a frequent strategy. Four teachers addressed "buddying" their lower-level ELL students with bilingual students, whereas three of the other teachers addressed the partnering of their higher-level ELL students with higher academic students, bilingual or non-Spanish-speaking. Teacher H expressed, "I've got some

bilingual students who are really good when it comes to helping and supporting the lower-leveled EL's in my class." The majority of the ELL population in this Northern California school district is Spanish-speaking and approximately forty-five percent of the student body at this school is Hispanic/Latino. Therefore, finding a "buddy" is one of the ways that these teachers ensure that lower-level, Spanish-speaking ELL students, whose English is either minimal or non-existent, are taking in some of that necessary content. Furthermore, Teacher D commented, "I will often put EL's next to a higher student just in case there needs to be any help in regards to understanding terms and whatnot." In the case of ELL students whose struggles are not necessarily with verbal English, but rather whose reading, writing or even comprehension skills lack, these teachers make sure to partner them up with academically proficient students who can provide further explanation when needed.

However, having addressed the "buddying" approach, there was an issue that was also addressed by these seven teachers. Teacher G explained, "I think it's one of the diciest strategies because sometimes the 'peer tutor' feels taken advantage of." While Teacher F added, "I feel bad both ways because I'm counting on someone else to help me out by helping the EL's, but then that can take away from what they need to do too." Thus, although partnering or "buddying" up ELL students with more English and/or academically proficient students can be used to support through translation or clarification of content, it is not guaranteed to work and can even affect the students being asked to "peer tutor."

Comparison of Findings to the Literature

Despite the vast amount of research on CSR and the impact of class size on student achievement (Bosworth, 2014; Fidler, 2001; Olson, 1999; Vaag Iversen & Bonesronning, 2013), there is considerably less research having to do with the effect of class size on teaching

effectiveness when teaching ELL students in middle school academic classes (Molnar et al., 1999). This study however coheres with earlier research that has proposed that the implication that smaller class sizes allow for adequate individualized student-teacher interaction and instruction time (Molnar et al., 1999). As the results of this study indicate, all eight participating teachers suggested that class size hindered and placed burdens on individualized student attention and allotted time for instruction. The results also seem to indicate that in terms of total in-class disciplinary issues for a large class, as well as the logistics involved, affect the realistic amount of time they could expend for each ELL student in terms of their needs. The broader implication that could be derived from this study is that there is a compelling need for further scholarship and research on the effect of class size on teaching effectiveness for ELL students who are placed in mainstream middle school academic English, social studies, math and science classes.

Summary

The findings from this study generated five broad themes. All eight participating teachers voiced their concerns, constant struggles and experiences, whether it was regarding the pacing in the classroom, limited amount of time available for each individual student with adequate one-on-one attention, or strategy and tools such as technology, think-pair-share and “buddying” students up.

Although there can be multiple interpretations that can be drawn from this study, consistent with qualitative methodology, a retrospective view foregoing the research question and the findings suggests that all eight participants in this study agree that class size does affect the teaching effectiveness for teachers of ELL students in large mainstream academic classrooms.

Chapter 5 Conclusions

From the data collected, the researcher found that different aspects of class size affects teaching effectiveness for ELL students placed in mainstream academic English, social studies, math and science classrooms. With larger class sizes, pacing is something that must be carefully addressed due to the variation in student needs. However, with students who are struggling both with the content and language, the pacing becomes more of a challenge. Furthermore, the amount of individualized help a teacher provides their students, particularly focusing on ELL students who depending on their English proficiency may need extra time and clarification, is affected by a larger class size as well as the number of ELL students in that class. Nonetheless, the researcher also found that several tools, including technological resources and strategies such as think-pair-share and the partnering of students is incorporated in order to enhance the teachers' ability to deliver content to their ELL students as well as the rest of the students in the classroom.

Moreover, this study's collected data supports the theory of differentiated instruction (Hall, Strangman & Meyer, 2003). This study suggests that incorporating differentiation is not simply recommended or "good teaching." Rather, it is essential in order to meet the needs of each and every student in the class, specifically ELL students whose language or literacy may be impeding them from fully understanding or attaining content.

The primary themes from the data are presented first, followed by analysis and discussion of each primary theme. A comparison of the findings to the existent literature is at the end of this chapter.

Limitations/Gaps in the Research

First and foremost, this particular study gathered data from a small sample size of only

eight participants. Although face-to-face, recorded interviews allowed for a more thorough analysis of the issue at hand as well as the experiences of these eight middle school teachers, the small number of participants limits the data and thus, leaving a gap in the research. Conducting this research with a much larger sample size of teachers provides the researcher with enough data and perspectives to draw stronger conclusions.

Second, all eight teacher participants teach at the same middle school, resulting in a limited scope. It was assumed that the sample of classrooms with ELL students was representative of all ELL students in the district. The participation of not only a larger quantity of teachers, but from multiple middle schools throughout the district or overall area would allow for an expansion in the research and a more extensive analysis.

Overall Significance of the Study

Class size is a controversial issue which districts, schools and teachers have faced and continue to encounter today. This study revealed the challenges that teachers of ELL students in academic subjects face with larger class sizes, whether it's with pacing, being able to provide all students with an adequate amount of individualized attention, or incorporating the appropriate and necessary differentiation, providing each and every student with the tools and framework to support their individual learning styles and needs. As Hall, Strangman and Meyer (2003) explained, "Not all students are alike. Based on this knowledge, differentiated instruction applied an approach to teaching and learning that gives students multiple options for taking in information and making sense of ideas" (2003, p. 2). Differentiating instruction is a teaching style, and this kind of teaching will help ensure that teachers are providing students with what they need to achieve academically. Nevertheless, this study further reinforces the idea that

despite the use of differentiated instruction, the effect of class size on the effective teaching of ELL students in mainstream academic classes remains.

About the Author

Carolina N. Garcia is a full-time, first-year teacher at a Northern California middle school where she teaches seventh grade English and ESL (English as a Second Language). Despite having moved around a lot, her education has almost entirely taken place in the Bay Area. She graduated from Dominican University of California with her Bachelor of Arts degree in English and minor in Spanish in May 2014, obtained her single subject credential in English in May 2015, and is further advancing her education by earning her Master of Science in Education in May 2016.

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Appendices

Appendix A

Principal Cover Letter/Consent Form

Dear Principal,

My name is Carolina Garcia and I am a graduate student at Dominican University of California. I am conducting a research study to examine class size's effects on the teaching of seventh and eighth grade English language learners in academic classes. This research project is an important part of my graduate thesis requirements, and will be supervised by Suresh Appavoo, Associate Professor of Education, Department of Education and Counseling Psychology at Dominican University of California.

I am seeking your permission and approval to interview your staff regarding class size's effects on the teaching of seventh and eighth grade English language learners in academic classes. This study consists of a thirty to sixty-minute face-to-face recorded interview with each of eight teacher participants.

The privacy of all participants will be ensured, maintaining anonymity in any document that may be published. All data will be destroyed one year after research is complete.

Should you have any questions or concerns regarding my research, please feel free to contact me by email at carolina.garcia@students.dominican.edu. If you have further questions or concerns, you may contact my research supervisor, Suresh Appavoo, suresh.appavoo@dominican.edu or the Institutional Review Board for the Protection of Human Subjects at Dominican University of California by calling (415) 485-3278

After my research project has been completed in May 2016, I will be glad to send you a summary of my research results.

If my request to survey and interview your teachers, meets with your approval, please sign and date this letter below.

Thank you very much for your time and cooperation.

Sincerely,

Carolina Garcia
Dominican University of California
50 Acacia Avenue
San Rafael, CA 94901

I agree with the above request

_____ _____

Signature **Date**

Appendix B

Teacher Cover Letter

Dear teacher,

My name is Carolina Garcia and I am a graduate student at Dominican University of California. I am conducting a research study to examine class size's effects on the teaching of seventh and eighth grade English language learners in academic classes. This research project is an important part of my graduate thesis requirements, and will be supervised by Suresh Appavoo, Associate Professor of Education, Department of Education and Counseling Psychology at Dominican University of California.

I am seeking your participation in this study. This research study consists of a thirty to sixty-minute in-person, recorded interview with selected teachers, which will include reflection on your own teaching background and practices as well as on whether or not and how class size affects the teaching of seventh and eighth grade English language learners in academic classes.

The privacy of all participants will be ensured—maintaining anonymity in any document that may be published. All data will be destroyed one year after research is complete.

Should you have any questions or concerns regarding my research, please feel free to contact me by email at carolina.garcia@students.dominican.edu. If you have further questions or concerns, you may contact my research supervisor, Suresh Appavoo, suresh.appavoo@dominican.edu or the Institutional Review Board for the Protection of Human Subjects at Dominican University of California by calling (415) 485-3278

Thank you very much for your time and cooperation.

Sincerely,

Carolina Garcia
Dominican University of California
50 Acacia Avenue
San Rafael, CA 94901

Appendix C

Teacher Consent Form

1. I understand that I am being asked to participate as a Participant in a research study designed to assess certain personal attitudes related to class size affecting teaching English Language Learners in middle school academic classes. This research is part of Carolina Garcia's Master's Thesis research project at Dominican University of California. This research project is being supervised by Suresh Appavoo, Associate Professor of Education and Counseling Psychology at Dominican University of California.

2. I understand that participation in this research will involve taking part in a thirty to sixty minute recorded interview, which will ask me to reflect on history or personal experience, and thus, express my thoughts and feelings regarding class size's effects on teaching ELLs in middle school academic classes.

3. I understand that my participation in this study is completely voluntary and I am free to withdraw my participation at any time.

4. I have been made aware that the interviews will be face-to-face and will be recorded. All personal references and identifying information will be kept private, and all Participants will be identified by pseudonyms; the master list of this information will be kept by Carolina Garcia in a locked file. Interviews will be seen only by the researcher and her faculty advisors. One year after the completion of the research, all written and recorded materials will be destroyed.

5. I am aware that all study participants will be provided with a written summary of the relevant findings and conclusions of this project. I understand that my anonymity will be protected in any publications concerning this research.

6. I understand that I will be discussing topics of a personal nature and that I may refuse to answer any question that causes me distress or seems an invasion of my privacy. I may elect to end participation in any aspect of this research at any time.

8. I understand that if I have any further questions about the study, I may contact Carolina Garcia at carolina.garcia@students.dominican.edu or her research supervisor, Suresh Appavoo at suresh.appavoo@dominican.edu. If I have further questions or comments about participation in this study, I may contact the Dominican University of California Institutional Review Board for the Protection of Human Participants (IRBPHP), which is concerned with the protection of volunteers in research projects. I may reach the IRBPHP Office by calling (415) 482-3547 and leaving a voicemail message, by FAX at (415) 257-0165 or by writing to the IRBPHP, Office of the Associate Vice President for Academic Affairs, Dominican University of California, 50 Acacia Avenue, San Rafael, CA 94901.

9. All procedures related to this research project have been satisfactorily explained to me prior to my voluntary election to participate.

I HAVE READ AND UNDERSTAND ALL OF THE ABOVE EXPLANATION REGARDING THIS STUDY. I VOLUNTARILY GIVE MY CONSENT TO PARTICIPATE. A COPY OF THIS FORM HAS BEEN GIVEN TO ME FOR MY FUTURE REFERENCE.

Name: _____

Signature: _____ **Date:** _____

Appendix D

Participant Bill of Rights

RESEARCH PARTICIPANT'S BILL OF RIGHTS

Every person who is asked to be in a research study has the following rights:

1. To be told what the study is trying to find out;
2. To be told what will happen in the study and whether any of the procedures, drugs or devices are different from what would be used in standard practice;
3. To be told about important risks, side effects or discomforts of the things that will happen to her/him;
4. To be told if s/he can expect any benefit from participating and, if so, what the benefits might be;
5. To be told what other choices s/he has and how they may be better or worse than being in the study;
6. To be allowed to ask any questions concerning the study both before agreeing to be involved and during the course of the study;
7. To be told what sort of medical treatment is available if any complications arise;
8. To refuse to participate at all before or after the study is stated without any adverse effects. If such a decision is made, it will not affect his/her rights to receive the care or privileges expected if s/he were not in the study.
9. To receive a copy of the signed and dated consent form;
10. To be free of pressure when considering whether s/he wishes to be in the study.

If you have questions about the research you may contact me at (carolina.garcia@students.dominican.edu). If you have further questions you may contact my research supervisor, (Suresh Appavoo at 415-482-3598) or the Dominican University of California Institutional Review Board for the Protection of Human Participants (IRBPHP), which is concerned with protection of volunteers in research projects. You may reach the IRBPHP Office by calling (415) 482-3547 and leaving a voicemail message, or FAX at (415) 257-0165, or by writing to IRBPHP, Office of Associate Vice President for Academic Affairs, Dominican University of California, 50 Acacia Avenue, San Rafael, CA 94901