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Academic Achievement and Teachers' Perceptions of Male and Female Teenage Students in a Private School in Quito, Ecuador, 2017-2022

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DEDICATED TO

To my husband, who supported me through many days and nights at the desk and put off his own masters' degree for my sake.

To my brother and my parents, who were always attentive and understanding when I said no to family plans.

To my friends, who encouraged me to pursue this degree in the first place. To the friends I made along the way in this difficult journey.

To my grandparents, who would have been proud of my achievements in academic and personal life. I will always miss you.

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RESUMEN

Se ha encontrado que los estudiantes varones tienen un rendimiento académico insuficiente en países anglosajones en materias de lengua, lo que significa que tienen el potencial de tener un mayor rendimiento, pero no lo hacen. Adicionalmente, los docentes idealizan a las estudiantes mujeres como las aprendices "perfectas". Este estudio examina estas problemáticas en una unidad educativa privada de Quito, Ecuador, brindando nuevas perspectivas del aprendizaje de Segunda lengua, así como una conexión general a las decisiones pedagógicas que los profesores pueden tomar para abordar el bajo rendimiento y bajas expectativas para con sus estudiantes varones.

Se determinó que los estudiantes varones obtienen notas más bajas que las mujeres en L1 y L2, con fluctuaciones que resultan de factores que cambiaron al mismo tiempo: metodología, medio de enseñanza, una pandemia global. Más estudios son necesarios para establecer una relación más clara. En términos generales, el rendimiento aumentó tanto en L1 como L2 para estudiantes varones y mujeres después del cambio. En general, los docentes consideran que las estudiantes mujeres tienen mejores hábitos de estudio, mayores expectativas sociales sobre ellas para obtener mejores calificaciones, y una ventaja biológica en habilidad verbal mayor sobre los estudiantes varones. El estudio provee un vistazo a las prácticas docentes en adquisición de Segunda lengua en Latinoamérica desde la perspectiva de las diferencias en rendimiento académico según el sexo, un campo que no ha sido estudiado a profundidad todavía.

Palabras clave: diferencias de género, rendimiento académico, percepciones de docentes, adquisición de segunda lengua.

ABSTRACT

Male students have been demonstrated to underachieve in language arts and literacyrelated subjects in Anglo-Saxon countries, meaning they have the potential to achieve more but do not. Moreover, teachers have been found to idealize female students as the "perfect" learner. This study examines these issues in a private school in Quito, Ecuador, providing insights into Second Language Acquisition and an overall connection to pedagogical choices teachers can make to address their male student's lower achievement and lower expectations.

Male students were found to achieve lower grades than female students in L1 and L2, with fluctuations that result from factors changing around the same time: Methodology, teaching medium, a global pandemic. More studies are needed to establish a clearer relationship. In general terms, achievement increased in L1 and L2 for male and female students after the switch. Teachers overall considered female students to have better study habits, greater societal expectations to do better academically, and a greater biological verbal skills advantage over male students. The study provides a snapshot of SLA teaching practices in Latin America from the perspective of differences in achievement by sex, a field that has not been studied in depth yet.

Key words: Gender differences, academic achievement, teacher perceptions, second language acquisition

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CHAPTER 1: INTRODUCTION

1.1 Introduction

Gender differences present in the teaching profession have been brought up to the forefront in the past few decades, whether relating to the feminization of teaching in general (Drudy, 2008, Carrington & McPhee, 2008), to debates around the permutations of teachers' and students' sex and/or gender in classrooms (Villalobos et. Al, 2016, Sokal & Katz, 2008, Hernandez, 2016, Pendleton, 2016, Whitmire, 2010), to the differences in academic achievement between male and female students (Whitmire, 2010, Parry, 2000, Radovic, 2018, Carcamo et al., 2020, Martens, 2000). Regarding this last point, much research has been carried out regarding the overall low academic performance of male students, particularly in fields relating to language and literacy (Whitmire, 2010, Parry, 2000, Radovic, 2018, Carcamo et al., 2020, Sokal & Katz, 20018, Heyder et al., 2017, Jones & Myhill, 2004b).

However, very little has been written regarding differences in academic achievement in the fields of English as a Foreign or a Second Language. Li et al. (2012) included a component of gender analysis in their study about spelling and reading comprehension in L1 (Chinese) versus L2 (English), finding that gender is correlated to comprehension in L1 but not L2. Hashemian and Forouzandeh (2012) explore metaphorical competence in Iranian learners, where they found girls to exceed boys. Jiménez Catalán (2003), Wucherer and Reiterer (2018), and Feery (2008) looked at gender differences in learning strategies for L2 in general and found specific skills and strategies that male and female students choose. Lastly, one study (Peart, 2011) looked at vocabulary learning between English (L1) and Spanish (L2), but none were found to study Spanish as L1 and English as L2 through the lens of gender. There is less information available regarding EFL in Latin America. Most studies surrounding this gap have focused on academic achievement in Latin America in other subjects. For instance, Cárcamo et al. (2020) discusses the gender differences in math and language in Colombia, Radovic (2018) does as much for math in Chile. Parry (2000) looks at overall male underachievement in the Caribbean (Jamaica, Barbados, St Vincent and the Grenadines). Lastly, Villalobos et al. (2016) examines gender composition in schools in Chile and analyzes whether it affects achievement or not.

1.2 Significance and Research Objective

This research aims to contribute to the fields of EFL and gender in the context of Latin America, where not a lot of studies have been carried out. More specifically, it strives to gain insight into teacher's perceptions not only on their students' academic achievement, but some of the reasons that may inform those insights. By introducing self-reflective practice to complement the analysis, this research allows the reader a closer comprehension of the context and happenings at the school where the project was carried out.

1.3 Research Context

Ents' Bilingual School (this is a pseudonym, for confidentiality purposes) is a middle class, private school in Quito, Ecuador. The school was chosen for three reasons: The socioeconomic status of its students, the fact that it became bilingual quite recently (in the 2020-2021 school year), and because it is representative of the trends seen in the literature (see Hernandez 2016, Sokal & Katz 2008, Whitmire 2010) for faculty members: More female teachers in earlier grades than older grades, yet fewer male teachers overall. This has been hailed as part of the reason boys achieve lower grades and results (Whitmire, Villalobos et al. 2016, Pendleton 2016, Parry 2000, Sokal & Katz 2008).

The school opened 38 years ago as a navy academy, and has since undergone major changes, such as gradually becoming a regular, non-militaristic school, and beginning a fully bilingual program in the school year 2020-2021. Currently, the school educates around 700 students between preschool, elementary, and high school. Since it has been shown that lower socioeconomic status has a negative effect on academic achievement (Whitmire 2010, Parry 2000, Villalobos et al. 2016) it was important to examine a middle-class school where the effects of this variable could be mitigated. According to the newspaper Primicias (2023), Ents' Bilingual School's monthly tuition (between USD 300-350) is higher than the average private schools in Quito (USD 190,84 for Educación General Básica and USD 166,40 for Bachillerato) at all levels.

As mentioned above, the literature on boys' low achievement establishes it as a problem mainly occurring in literacy or language-related subjects (Voyer & Voyer 2014, Whitmire 2010, Parry 2000). Ents' bilingual program is now heavily based on literary analysis, a change that took place in 2020 and has proven difficult for both teachers and students. Since literacy skills are necessary for both L1 and L2, Ents' gives a unique opportunity to establish the differences in academic achievement for two languages using very similar pedagogical approaches.

Finally, teachers' distribution allows for a closer match between Ents' reality and the phenomena described in the literature, again allowing us a better comparison between the literature and school. Teachers' distribution has been established as part of the reason boys achieve lower grades in other instances, but there are not any connections to be made between achievement and faculty members' sex in this particular research.

1.4 Research Questions

The questions to be addressed are:

How do boys' and girls' academic achievement in English and Spanish in a private school in Quito compare with Anglo-Saxon countries? How do teachers perceive students' academic achievement in relation to students' gender?

1.5 Scope of the Study

The research examines the academic achievement in male and female secondary school students, focusing on the mean scores in language classes. The main comparisons are made between English and Spanish Language and Literature, the former since it is the focus of interest of the master's program, and the latter due to most of the literature addressing students' native language. Secondary comparisons are done with the science mean scores in order to establish a wide baseline of teachers' beliefs and perceptions, which according to the literature, favor boys in sciences (Whitmire 2010, Parry 2000, Radovic 2018). Lastly, overall mean scores (that is, the mean score of all subjects for any school year) were also considered.

High school students were chosen because, according to Voyer and Voyer's 2014 meta-analysis, "the magnitude of gender differences increased from elementary to middle school [in language, math, and science courses]" (p. 1193). Although measuring that magnitude is not within this work's scope, it could be a starting point for future research.

The terms "boys"/"male students" and "girls"/"female students" will be used interchangeably during this study. This is simply for readability's sake, and because a deeper discussion of sex, gender, gender identity, and gender (non)binarity is outside the scope and design of the study. This applies to students as well as teachers.

To gauge perceptions, an anonymous survey with a mix of close-ended (quantitative) and open-ended (qualitative) questions was sent to the high school teachers regardless of the subject they teach.

The study establishes the answers to the research questions with the data available. Firstly, boys were found to have lower academic achievement than girls across all subjects, in L1 (which corresponds to the available literature on Anglo-Saxon countries), and in L2 English, which is a novel finding and one of the most important contributions of the study, as this lower achievement in L2 has not been described in other pieces of literature. Secondly, teachers were found to have low expectations of boys' achievement within the academic, biological, and social domain while idealizing girls' performance and characteristics. An important limitation of the study is that it cannot decidedly establish underachievement of boys in the studied school, as students' behaviors and perspectives were not recorded for it.

Moreover, since high school students are the only ones included, the study is unable to comment on or contribute to the discussion on younger students' grades, perspectives, performance, etc. Due to the fact that schools register sex and not gender, it is not possible to articulate layered research considering students' and teachers' genders.

Chapter 2 looks at the literature available on differences in academic achievement between boys and girls, issues of teachers' perceptions and methodology, and how ESL research on gender differences has only been carried out in discrete subskills on the language, not on academic achievement.

Chapter 3 explains the selected methodology. Chapter 4 presents the analysis and the discussion. Chapter 5 presents the conclusions and findings in a concise manner.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This literature review establishes the various ways in which the issue of gender and academic achievement have been studied: The meaning of low achievement, distinguishing between test and school performance, comparing what has been found regarding countries like the US, Australia, Canada, the UK versus what could be found in Latin America and other continents. Lastly, it will briefly discuss issues of teacher's perspectives and methodology. Most of the sources under review come from peer reviewed journals and books.

2.2 Defining terms: Underachievement, low achievement, test performance, school performance

Jones and Myhill (2004b) discuss the terms underachievement and low achievement based on students' potential. Students who consistently get low scores no matter the reason have a low achievement score, whereas students who could probably get higher marks but do not do so are underachieving (p. 551). This study will focus on scores and teachers' perceptions, not on students' behaviors or situations. However, in order to avoid ambiguity, I will use the term "low/lower achievement."

Second, a curious phenomenon emerges in terms of gender differences: Male students tend to perform better on standardized tests, but female students achieve higher marks in school (Voyer & Voyer, 2014, p. 1174). This study focuses on school performance, as standardized tests results were not available for the selected students. It is worth noting that although most sources consider boys falling behind academically a recent phenomenon, Voyer and Voyer, 2014 have found in their meta-analysis data "ranging in years from 1914 to 2011, suggest that boys have been lagging for a long time and that this is a fairly stable phenomenon" (p. 1194). Voyer and Voyer (2014) imply that a key difference between school performance and test-taking can be understood as the difference between a stamina race and a sprint: Performance over a long period of time versus circumstances at a single point in time (p. 1175). School performance requires abilities and habits beyond talent and "intelligence," such as self-concept, beliefs, and self-efficacy (Cárcamo et al., 2020, Vesga-Bravo & Escobar-Sanchez, 2018, Namaziandost & Çakmak 2020) among others. The source of the grades that will be analyzed will become important once the trends and changes in the learning context within the school have been analyzed as well, but for now it suffices to say that curriculum changes have allowed for standardized test grades to be obtained in the first place.

2.3 Boys' and girls' academic achievement

The inspiration for this thesis paper came from studies carried out in countries like the United States, Canada, the United Kingdom, and Australia. These countries will be grouped as "Anglo-Saxon countries" and will be referred to as so unless it is necessary to single any of them out.

These countries have established either that boys are under/low achievers across the board or under/low achievers particularly in Language Arts subjects and/or literacy skills (see Heyder et al., 2017; Limbrick et al., 2012; Sokal & Katz, 2008; Van de Gaer et al., 2006; Watson, 2011; Watson et al., 2010). One of the most consistently mentioned countries regarding boys' lower achievement and measures to remedy it is Australia. Pendleton (2016) writes about one measure taken regarding classroom composition:

According to a 20-year Australian study of 270,000 students, both girls and boys performed between 15 and 22 percentile points higher on a standardized test when

they went to single-gendered schools (Australian Bureau of Statistics, 2014). Another Australian study, detailed in the Australian Curriculum, Assessment, and Reporting Authority showed that students enrolled in single-gendered classrooms consistently earned scores 15% to 22% higher than their coeducational classroom peers (Australian Curriculum, Assessment, and Reporting Authority [ACARA], 2014). (p. 37)

Whitmire (2010) and Villalobos (2016), also address the possibility of class composition affecting achievement, but research is inconclusive. Cabezas (2010) in Villalobos et al (2016) analyzed achievement in the standard test SIMCE according to class composition and found that the more girls there were in a class, the higher the academic achievement was (p. 384). Both Cabezas (2010) in Villalobos et al. (2016) and Pendleton (2016) show that effects on achievement are possible on testing, but not much has been said about class performance.

Whitmire (2010) argues that Australia did well with the "political truce" (p. 154) and not only carried out systematic studies to establish the depth of the problem, but handed out "government sponsored research, school experiments [and...] teacher guides" (p. 153) to teachers and schools to directly address boys' lower achievement without compromising girls' advances. The Australian cases show us that big, top-down changes can have an effect on boys' achievement.

2.4. Outside of the Anglo-Saxon countries

As established above, the majority of the literature focuses on countries other than the ones in Latin America, Africa, Asia, let alone exclusively Ecuador. Research in the neighboring country of Colombia discusses academic self-concept, expectancy-value models (Cárcamo et al., 2020) and real-life application of mathematical problems' effect on high school students' beliefs (Vesga-Bravo & Escobar-Sánchez, 2018). Only Cárcamo et al. (2020) look to address the issue of low achievement directly, presenting the problem as higher achievement by girls in the reading and writing sections in standardized assessments like TIMSS and PIRLS but not in the math ones (p. 28).

Vesga-Bravo and Escobar-Sánchez (2018) introduce an element of gender in their final analysis about Colombian students' beliefs about math and found that, before their intervention (problem-solving activities once a week for six weeks) (p. 112), girls thought math skills were innate and unchangeable. While this does not relate to low achievement directly (except insofar as growth mindsets "have been associated with positive learning outcomes" according to Calafato and Simmonds, 2023, p. 706), they do argue that learning math is "strongly linked to [students'] beliefs and attitudes about what math is [about]" (p. 104, my translation). Additionally, it is noteworthy that an analysis of results by gender was included in the first place, implying that gender differences were expected.

Radovic (2018) analyzes the problem of low math achievement in Chilean girls looking both at international standardized tests (like PISA and TIMSS, p. 224) and data from the SIMCE Chilean assessment, which measures "achievement in relation to the national curriculum" (p. 226, my translation) and has been applied since 1988. Citing other studies, Radovic reinforces the problem in other areas of the region like Argentina, Brazil, Mexico, Nicaragua, and Peru (p. 223). While Radovic attempts to establish the extent of the problem and (in her own study) the effect of factors such as test results over time, socio-economic status, and whether the school is private or not; Villalobos et al. (2016) focuses exclusively on one of the measures suggested to address low achievement in general: The impact of coeducational versus single-sex classrooms in Chile. Villalobos et al. (2016) cites Treviño et al. (2010) to succinctly establish the issue of boys achieving lower grades in language but higher ones in math as a Latin American problem (p. 383).

In the Caribbean, Odette Parry has analyzed the issue of boys' academic achievement for Jamaica, Barbados, and St. Vincent & the Grenadines (Parry, 2000). This is one of the few explicit pieces found on sex differences in achievement for Latin America. Parry establishes a general (i.e., not in any particular subject's) lower achievement for male students in primary and secondary school compared to female students as per Caribbean Examinations Council (CXC) standards. Yet, students' choice of subjects still reflects the majority of male students in sciences and female students in Arts (p. 6). This disparity remains beyond school years, where female workers are "heavily concentrated in the lower status and lower paid occupations and in the mass professions" (p. 7).

2.5. Teacher's perspectives and methodology

Jones and Myhill (2004b) have argued that teacher's expectations and perspectives as part of the issue that aggravates this problem, as well as notions of gender roles and the classroom. To support this, Parry (2020) further reminds readers that a variety of factors impact the relationship between people, men and women, student, and teacher, which "include structural and economic constraints, environmental factors, [...] images of manhood, and conflicting values and norms of wider society" (p. 2). In their 2012 paper, Mullola et al. studied teachers' perceptions in terms of students' level of activity, persistence, distractibility (among other factors) and found that when teachers have a negative perception of students, students tend to perform lower. Moreover, they found that teachers consider girls more teachable, more persistent, less distractible than boys, but the gap between boys and girls "narrowed when a male student was rated by a male teacher" (p.200). Jones and Myhill (2004b) have described perceptions like these as a:

[...] deficit model of male achievement, speaking of them in terms of the things they cannot, will not, and do not do. This would also seem to militate against the claim that teachers are more likely to see boys as having potential. (p. 542)

Furthermore, Mullola et al. (2012) state that these perceptions have a greater role in mother languages and math (p. 186). This source does not explicitly address the role of second language acquisition, but it shows yet another gap where SLA has been understudied in the achievement conversation.

Jones (2005) has noted that the underachieving girl and the high-achieving boy have been excluded from discussions on achievement differences. Jones establishes both groups as outliers compared with peers from the same gender: The expectation is that girls will receive high marks, and boys will receive low marks. Yet, it was found that underachieving girls and underachieving boys tend to have more characteristics in common with each other than with other boys and girls. Underachieving girls have been disregarded in policy and concerns in teachers. Moreover, Jonas & Myhill (2004a) found that teachers gender their constructions of underachievement in terms of ability and potential. "The perception of boys' achievement being the result of intrinsic potential and natural brilliance and girls' achievement being the result of diligence and hard work persists in modern discourses" (p. 533) may lead to different expectations on the teachers' part and result in lower achievement. They also add:

By identifying more boys as underachievers, [the teachers] could be seeing potential in lower achieving boys and failing to see potential in lower achieving girls. At the same time, teachers voice a contradictory, negative construction of boys, a deficit model, which problematizes boys and idealizes girls. (p. 542).

Regardless of teachers' beliefs (or complementing them), there have also been discussions on gendered methodologies or teaching practices. Drudy (2008) found that boys' underachievement is not correlated to the feminization of teaching, and therefore teachers (male as well as female) may apply different techniques to curb underachievement. Sokal and Katz (2008) agreed with this and examined students' beliefs about reading together with the use of computers as remedial action for boys' underachievement. They found that one single factor did not have any effects, but that addressing boys' views on whether reading is feminine or not, male teachers, and using computers, cumulatively improved boys' beliefs (p. 89). This study showcases the point made above, the choice of materials and pedagogy matter as much as who teaches the subject.

Whitmire (2010) also agrees that not one single factor is the panacea to boys' underachievement. Among other strategies, teachers may use adapted learning plans for all students, promote healthy coping competition mechanisms, change school cultures when it will not be conducive to learning, treat students firmly but warmly, enforce reading, reward competition, and not give up on any students (p. 112-132). Some of these factors will depend on school leaders, others require teacher resilience, and others could be considered more affective factors in the classroom rather than "purely teaching strategies". In order to achieve this, teachers would need support from the school, proper training, and commitment from parents to encourage their children to follow the changes too.

As for L2, there are various sources that indicate specific gender advantages in specific subskills of the language, which may help teachers prepare to address weaknesses of male and female students. For example, Wucherer and Reiterer (2018) found that male students have stronger phonological awareness skills, but female students had stronger grammar. Additionally, Peart (2011) states that boys are better suited at computer learning

and written tasks, while girls perform better in oral tasks and participate more frequently. Both sources are apparently at odds with each other, but they show the complexity and nuance that separating specific subskills by gender can entail.

Other authors have resorted to more holistic differences in L2. Namaziandost & Çakmak (2020) looked at the role of flipped classroom in self-efficacy beliefs and found (among other things) that girls benefit from interaction in the target language a lot more than boys. Hashemian and Forouzandeh (2012), Peart (2011), Jiménez Catalán (2003), and Whitmire (2010) reached similar conclusions through different means. Most importantly, Jiménez Catalán (2003) looked at the kinds of vocabulary learning strategies in male versus female students and found that while both sexes focus their strategies on discovering meaning rather than consolidating it, female students use a wider variety of strategies than male students. Teachers in class would have to appraise which strategies are used by which students and address weaknesses when needed, as well as find alternative means for male students to produce and speak the language.

In summary, this literature review explores the issue of gender and academic achievement. The review notes a gender difference as female students achieve higher marks in school performance as opposed to testing. The research spans Anglo-Saxon countries, emphasizing Australia's successful measures to address boys' lower achievement.

Beyond Anglo-Saxon countries, limited research is available for Latin America, Africa, and Asia. Studies in Colombia, Chile, and the Caribbean address various aspects of academic achievement, highlighting disparities between genders in different subjects. Teacher perspectives play a crucial role, impacting students' performance, and various methodologies are discussed to address gender-related achievement gaps. The research available on L2 emphasizes sex differences in specific skills or subskills, without discussions of academic achievement. Most of the Anglo-Saxon studies focus on underachievement in L1. This study adds to the research body by demonstrating that boys also have lower academic achievement than girls in L2 English, not just in L1. Additionally, it sets this phenomenon in Quito, Ecuador, an understudied demographic in the conversation about sex differences in achievement as well as teachers' perspectives regarding achievement and students' sex. As for teachers, they were found to idealize girls and always provide low expectations for boys in biological, academic, and social settings.

CHAPTER 3: METHODOLOGY AND RESEARCH DESIGN

The purpose of the study is to determine whether students from Ents' School follow or do not follow the global trends discussed in the literature regarding girls outperforming boys, as well as gauge teachers' perceptions on the issue. Therefore, the methodology chosen for this study is mixed. The first part is a quantitative analysis based on anonymized end-ofschool-year scores corresponding to the students from 8th grade to 3rd "bachillerato" for the last five school years. These were anonymized prior to the beginning of the research so that none of the students' names were recorded, simply their sex and their scores.

As all studies need a sample size, ours could be called "female grades" and "male grades" to avoid the ambiguity of calling them female and male participants. The main reason for this is that many grades across the five school-year period may correspond to the same students, but an exact number cannot be provided as the data were anonymized. Therefore, it would be false to say, "data from X number of female students and Y number of male students were collected." 598 female grades (41 percent) and 866 male grades (59 percent) were collected from high school students at Ents' starting in the 2017-2018 school year and finishing on the 2021-2022 school year.

However, it is possible to share a snapshot of Ents' population in each of the five school years under study. The number and composition of students from which the grades were collected were calculated and tabulated, showing the following table. The biggest takeaways from it are twofold: It shows the overall reduction in number of students Ents' underwent (a big reason an analysis by cohort was carried out, so as to even out the results a little) as well as a slight minority in girls compared to boys.

Table 1: Student Composition by School Year						
School Year	F	М	F%	M%		
2017-18	136	192	41%	59%		
2018-19	143	208	41%	59%		
2019-20	128	192	40%	60%		
2020-21	89	135	40%	60%		
2021-22	102	139	42%	58%		

First, each school year's classes' scores were divided by female and male students. Afterwards, the global mean scores of all female students in each class (parallel) and all male students were calculated and compared for English, Literature, Science(s) (Chemistry, Biology, Physics), and all subjects. The mean scores for all girls and all boys per class (8th A, 8th B, 9th A, etc.) were calculated for English, Literature, Science, and all subjects. A further mean score calculation was done to check the data by cohort (i.e., 8th grade as a combination of 8th A and 8th B) in order to homogenize the different number of groups each school year had. All this information was represented in line charts (for the scores analysis) and column charts (for the class composition) for ease of analysis, and then further condensed in frequency tables to be presented below. The scores for boys and girls per class in Literature and English were ordered from highest to lowest, in order to calculate the median score. Afterwards, the top ten and bottom ten scores for boys and girls in Literature and English were compared against each other and against the median. This was done in order to establish the best scores across all classes and compare them in a clearer way.

The second part of the study combines quantitative and qualitative data collection. An anonymous survey was shared via Google Forms with all the high school teachers at Ents' School, sharing a snapshot of the findings with them and eliciting responses, perceptions, and comments. The survey had 8 close-ended questions, 7 mandatory open-ended questions, and 1 optional open-ended question. The survey answers corresponding to the close-ended questions were analyzed based on the graphs generated automatically by Google Forms, and the open-ended answers were analyzed using a coding system.

Most of the survey participants are language teachers, either English or Spanish (8 responses). 1 Math teacher, 3 Social Sciences, and 3 Other subjects' (Arts, Technology, etc.) teachers also responded. Out of these, 11 were female teachers and only 4 were male teachers. The data were analyzed according to the main themes which were then discussed in light of the literature and the quantitative data analysis. Lastly, while this research is not a reflective practice study, practitioner reflections have been included to complement the qualitative data and more fully contextualize and interact with the results presented.

CHAPTER 4: FINDINGS AND DISCUSSION

4.1 Scores data

We will start by examining the scores data and then proceed to the survey data. First, the mean scores from every school year were depicted in line charts and frequency tables in order to visualize differences in male versus female achievement. The initial analysis showed that girls achieve higher mean grades compared to boys across all school years in English, Literature, Science(s), and all-subject mean scores, confirming the phenomenon of lower achievement as seen in Anglo-Saxon countries (Pendleton, 2016, Heyder et al., 2017, Whitmire, 2010, Carrington & McPhee, 2008). Male students do not fail classes according to Ent's standards (mean score below 7/10) except for two instances in this five-year period, once in Literature and once in English.

Another layer of confirmation happened when calculating the median scores for boys and girls in English and Literature, as seen below in this table where scores by male students were colored in blue, and scores by female students were colored in pink. This is not the full table, only the top and bottom scores with the median score:

Table 2: Median score and comparison of grades per sex per language					
Subject	English	Literature			
Median Score	8.26	8.21			
	9.44	9.53			
	9.25	9.22			
	9.25	9.20			
en	9.19	9.11			
Top Ten	9.14	9.08			
T	9.12	9.02			
	9.12	8.98			
	9.09	8.95			
	9.09	8.95			

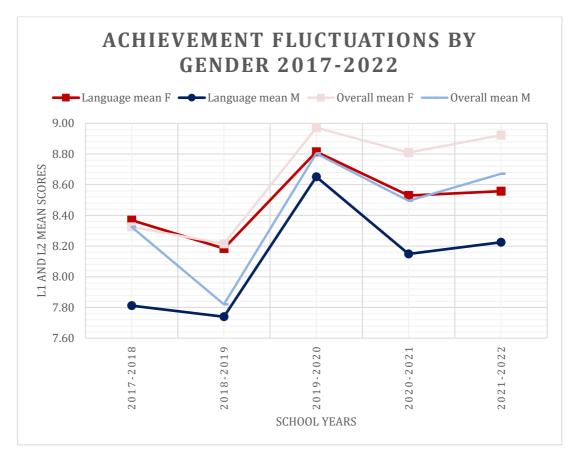
	9.07	8.93
	7.46	7.40
	7.35	7.34
	7.30	7.32
Ten	7.26	7.30
Bottom T	7.20	7.24
	7.18	7.22
	7.14	7.19
	7.13	7.13
	7.03	7.05
	6.89	6.94

This table showcases that boys overall have a lower achievement than girls, as all the bottom ten scores in Literature belong to boys, as well as eight out of ten for English. Three mean scores by boys reached the top ten scores for English, whereas only two managed to do so for Literature. This table gives more evidence to clearly support this phenomenon as seen in Anglo-Saxon countries: girls have a higher achievement in L1 and L2.

Further analyses were conducted in order to discover if there were other patterns across time, across classes (i.e., 8th A vs 8th B), across cohorts (all 8th grades vs all 9th grades), across subjects, etc. There are two key findings provided by the extra layer of analysis. First, male students improved their scores in the 2019-2020 school year compared to the past two years, but also did female students. Second, the differences in achievement by gender in L1 or L2 shift around 2019-2020-2021, where boys' and girls' highest mean scores change from English to Literature. Moreover, almost in all instances where male students achieve the highest mean scores of all subjects, and sometimes even the whole cohort manages to have the highest mean scores per language or per all subjects.

The following figure represents a similar process as the initial analysis, as well as the switch described above and a visual representation of girls' higher mean scores in Languages (L1 and L2) as well as general mean scores for all subjects.





The increase in achievement by all students as well as the switch from "doing better" in English to doing better in Literature is difficult to interpret accurately to the point of being unable to establish causation or correlation, but it is undeniable that achievement increased for all students and reached its highest points in 2019-2020. Ents' underwent changes during that time, changes that would affect the grades independently and cumulatively. The following factors are not meant to single-handedly explain the phenomena described (which is beyond the scope of the study), but to provide several hypotheses as to what could be changing the

grades. This "peak and switch" is the main reason the practitioner's reflections were included, as will be discussed below.

Starting from 2019-2020, the grades do not reflect the same learning process, resources, teaching medium, or methodological approach as the previous school years. Firstly, the 2019-2020 school year saw a change in school leadership, a curriculum update away from the Ministry's guidelines and more focused on developing skills rather than memorizing content in English as well as Literature, and an online end to the school year due to the COVID-19 pandemic. The move to online education in turn brought about changes in teachers' priorities in the relationships with their students (purely teaching, or being a source of comfort and connection), changes in family dynamics for everybody, a learning curve in teachers and students when attending/directing online classes, changes in how assessment was conducted and grades were collected, etc. All of these factors and more have to be considered when examining online education. Moreover, the next school year (2020-2021), Ents' continued online, formally changed its assessment tools (out of necessity as well as due to a new curriculum) and took on a literary analysis approach to teaching English. The last school year under study (2021-2022) started in a hybrid medium and finished face to face as before 2019-2020.

All these big changes had many ramifications, such as number of students enrolled, use of technological tools, different resources, and emergency Ministry mandates, for example according to El Universo (2020) it was stipulated that students could not fail any subjects. An in-depth discussion and analysis of every single factor at play here is beyond the objective of this study. However, some of the factors are worth discussing a little further to provide background for possible additional research, as well as succinctly articulate more limitations of this study.

As stated before, around the COVID-19 pandemic the school also saw a change in curriculum and methodology for both languages. It became bilingual, the Literature curriculum was changed to be based on skills and not content, and lastly the English program switched from an EFL approach (using grammar and textbooks) to a literary analysis approach also based on skills and literary works written for native speakers. Coursebooks were removed completely in all subjects. Moreover, the English department built a new Scope and Sequence from the ground up based on standards from the US, not following the Ecuadorian curriculum anymore.

As teachers, we were required to change our assessment tools to complement the new Scope and Sequence. Exams stopped being used, and alternative assessment became the "standard" assessment method, most commonly product or project based. This is the main reason there were not any test grades available to analyze the comparison between test performance and school-year performance by either gender, testing being a domain where male students yielded better performance than female students (Voyer & Voyer, 2014). This also means that, although this data processing has treated the grades equally, they do not represent the same processes, they do not come from similar assessment tools, and they were not weighed equally in order to produce the end-of-year reports I used to develop this project. Further research could be carried out by using grades that consistently reflect school-wide policies and practices across a longer period of time.

A possible hypothesis for the "preference switch" could be that students started achieving lower scores in the school years 2019-2021 in English as they were challenged to use the skills they had been acquiring, could not rely on memory alone anymore, and were forced to communicate in English through the online sessions in English Language and Literature, Arts, and Science, leading to more L2 input and output. According to Bobkina and Stefanova (2016), we can define the change in methodology as one aimed at critical literacy and critical pedagogy through the EFL classroom. We follow a reading process that expects students to respond and analyze pieces of literature (p. 680), we do not "distance ourselves from literary theory" (p. 681) and we encourage "interpretation of the world, self-reflection, intercultural awareness, critical awareness, reasoning and problem-solving, and language use" (p. 683). Ents' "[reconceptualizes] L2/FL education which emphasizes learners themselves [and] welcomes and warrants the use of literature in Foreign Language Teaching and Learning" (Tsang & Paran, 2021, p. 460).

This research provides a point of reference for teachers across Latin America and the world to analyze students' scores and add to their reflective practice. They could analyze their own students' achievement by gender within classes or subjects and attempt different ways to address issues depending on their own contexts, students, realities. A deeper analysis of boys' lower achievement than girls in Ents' is not possible without stepping further away from the data, and my own reflections and conjectures were provided as a possibility that would need more systematic study in order to be confirmed or rejected. It will suffice to say that, whether in English (L2), Spanish (L1) or other/all subjects, boys achieve lower scores than girls in this private school in Quito, Ecuador. This partially confirms and partially contradicts Treviño et al. (2010) in Villalobos et al. (2016) when they discussed how Latin American boys achieve lower scores in language but higher ones in math. My results also support what has been found in the literature about Anglo-Saxon countries: Boys achieve lower scores in Language Arts subjects (see Heyder et al., 2017; Limbrick et al., 2012; Sokal & Katz, 2008; Van de Gaer et al., 2006; Watson, 2011; Watson et al., 2010).

Lastly, my study provides a unique snapshot of gender differences in achievement in L2 and not just L1. Sources like Li et al. (2012), Hashemian and Forouzandeh (2012), Peart (2011), Jiménez Catalán (2003), Wucherer and Reiterer (2018), and Feery (2008) discuss differences by gender in choice of strategies or discrete language skills, but none of them refer to academic achievement, nor to Spanish L1 and English L2 in a school setting. Further research could be undertaken in order to appraise this phenomenon in other schools, contexts, sample sizes, and Latin American countries.

4.2 Survey Results

The first four questions of the survey were used to gauge a baseline of expectations from the teachers, asking whether they thought any gender has a higher innate ability in Languages, Literature, and Science. For the most part, teachers do not believe either gender is innately more skilled than the other in literature, language learning, and sciences. However, in second place and especially regarding literature and reading, it is girls who are perceived as having the natural edge over boys. Moreover, only one female language teacher responded that male students are more skilled at sciences.

The next three questions discussed their perceptions about students' scores in their own subjects. Seven out of fifteen teachers responded that both genders have the same academic achievement. No teachers responded in favor of male students, but seven others responded that girls have better scores than boys in their subjects. A male language teacher was the only one who decided to write his own answer: "It depends on each group and each student, not gender." Once this baseline was established, the survey contextualized the achievement story in Ents' by first requesting teachers to answer whether they thought their students followed the Anglo-Saxon trend. Figure 2: Is the school experiencing the same as Anglo-Saxon countries with girls

achieving higher in literature, literacy, and reading?

Estudios en países anglosajones indican que los varones tienen un desempeño académico menor a las mujeres en literatura, habilidades de lectura y a...ir qué ocurre con nuestros estudiantes, ¿qué diría? 15 responses



When asked to predict the school's performance compared to Anglo-Saxon countries' low achievement for boys, twelve teachers (eighty percent) responded that the same thing happens at the school. When comparing these answers to the previous ones, teachers demonstrate a contradiction between an idealized performance ("I do not think any gender has greater abilities than the other") and an "actual" performance when grounding the comparison in studies carried out in other countries. There were not any teachers who responded that male students had a higher achievement than girls.

Three teachers drafted their own responses, two asserting that it will depend on each student, and one (a female "other subjects" teacher) simply stating that this comparison does not apply. It is hard to infer what she meant by this given the survey design; it may be she thought there should be no difference in academic achievement by gender, or results should be more heterogenous without a clear advantage. When asked about their reactions to the schools' results matching the Anglo-Saxon countries, nine teachers responded they were a little surprised, four teachers were not surprised at all, and two that it was somewhat surprising. No teachers responded that these results were very surprising.

4.3 Overarching Themes

The following section provides a summary and analysis of the overarching and recurring themes (qualitative data) found in teachers' answers in the open-ended sections of the survey¹. These themes will provide the discussion and context for analysis for the previous section. The survey was conducted in Spanish to accommodate for all teachers involved, so I have included my own translations of their comments.

1. Gender and academic self-management

This overarching theme encompasses the recurring themes of personal and academic engagement and interest, girls' academic and self-management skills, and boys' or genderunspecified habits and skills. In regard to the first theme, four out of the seven teachers who appealed to academic management factors denied gender or sex being one worth of consideration in terms of achievement. "Students who make the most of each subject are those who want to learn regardless of gender." and "Studying depends on responsibility, (and level of commitment) not gender" (both by teacher 1, female, humanities) most explicitly show teachers' rejection of gender or sex. Instead of gender, teachers first highlight a student's willingness to learn and internal drive to do well in a subject, regardless of the student's gender.

Four of the teachers who made comments about personal and academic engagement and interest appealed to this first theme before or after learning about our similarities to the Anglo-Saxon countries' achievement. "Women must make more effort in order to meet the expectations posed by society" (teacher 1, female, Humanities) they argue, or they set the responsibility in teachers' hands: "As long as skills are developed with everyone, there is no reason for there to be differences" (teacher 6, female, languages). This last teacher however,

¹ For a detailed record of teachers' comments, see annex 1.

attempted to explain it with "[Girls] tend to show more interest in [English and Literature]." These appeals were made in order to make sense of boys' lower achievement while still keeping a biological, inherent factor out of their comments.

Whether teachers changed their mind with the data or not, most teachers answered that no gender or sex has greater innate skills than the other. Yet 9 out of 15 teachers (sometimes repeatedly) argue that girls have stronger academic and self-management skills than boys. Teacher 5 (languages, female) is representative: "Girls are more detail-oriented, they read assessment criteria carefully [...] have more attention to detail [...] are more disciplined when turning in work [...] follow instructions". This apparent contradiction support Jones and Myhill (2004b), who found that teachers' "commitment to equal achievement, however, was not reflected in teacher's perceptions when prompted to think about classroom attitude and behavior and ability within different areas of the curriculum" (p. 552). There is a dissonance in teachers' minds between our practice and deeper beliefs about the connection between study and student's sex. This also supports the prior point made about an ideal performance versus an actual performance by students as perceived by teachers.

The male or gender-unspecified study habits have two strands: Reading as well as studying to analyze information/develop habits. Teacher 15 (female, others) says "Boys do not like reading, they do not make the time for it". Teacher 3 (male, humanities) stated that "[grades] have a lot to do with reading and writing habits, in contrast with other activities or likes male students have [...]". Teachers show low expectations of male students not only because the second most common answer about innate abilities was granted to female students, but also when assuming their reading habits are deficient, and that their "activities and likes" could be less worthy than reading. Tangentially, none of the teachers mentioned or added anything about possible high-achieving male students.

Teachers' perceptions, in a way, stem directly from what they can observe in this category. Teachers cannot easily change them, but it could be done by receiving support from family members, a student's own willingness to improve, and teachers addressing affective factors in class, as well as their own biases and perceptions. Here, the perceptions combine things students do (male students and non-specified students) as well as traits students "are" (female students).

Assigning inherent traits to girls and performance to boys contradicts some of the findings in Jones and Myhill (2004a) who state, "The perception of boys' achievement being the result of intrinsic potential and natural brilliance and girls' achievement being the result of diligence and hard work persists in modern discourses" (p. 533). Girls are presented as inherently diligent, while boys do not achieve higher precisely due to a lack of a strong reading habit. There were not any explicit references to students' potential.

2. Nature versus nurture

This overarching theme encompasses appeals to nature and science, societal expectations and stereotypes, and perceived gendered nature or interests. In the midst of many teachers appealing to academic management factors and believing there are not any inherent, better skills in any sex, six teachers referred to biological factors with twelve comments overall. Four of those comments discuss biological skills regardless of gender, six assign specific traits to females, and two discuss males' traits. Consider "Both men and women have innate skills, but they have to be developed in different ages: Infancy, adolescence, and adulthood" (teacher 13, female, other subjects), "The language side develops earlier in women, which is why I think they have better language skills" (Teacher 6, female, languages) and "...for exact sciences I do think men have a kind of reasoning built for it" (Teacher 11, female, languages, the only one who responded "males" to the background survey). Even in

terms of biological traits, women are perceived to "be more" or "have more" than men do. Yet about the same number of comments represent a gender-neutral perspective, more nuanced, one that acknowledges other factors besides innate skills.

One of the other factors mentioned was societal expectations. Six comments belong in this category, which again shed a poor light on boys and a more favorable one on girls. One teacher considered gender "...a stereotype, nothing more" (teacher 7, female, languages), a comment that is hard to contextualize without a follow-up. As for the rest, teacher 4 (male, languages) succinctly said: "I do not consider gender to be a determining factor, but rather the social constructions around gender which influence [girls' higher achievement than boys'], for example, the fact that women have more expectations to meet.". Conversely, "[society] has instilled in [boys] activities that do not entail observations nor analysis" (teacher 4, male, language). Teachers show awareness of how society can impact students, whether negatively or positively. In this case, society is somehow more favorable to boys as opposed to girls and at fault for boys' lower achievement. Parry (2000) makes a similar point when stating that Caribbean boys are aware that life after school is easier for them, regardless of the choices they make (p. 23).

Perceived gendered interest and nature threads the limits between nature and nurture through eighteen comments, out of which only one gives an advantage to boys. These interests and nature describe strengths girls have, and weaknesses or shortcomings boys present. "Girls are more sensitive, they worry about their peers and about nature" (teacher 13, female, others), and regarding language learning "girls tend to notice ambiguity in messages more easily and they also tend to show more creativity when drafting the message" (teacher 10, language, female). In context, I assume "the message" is a written or oral task done in class. On the other hand, boys are "more interested in other activities such as sports and not so much in English or literature" (teacher 1, female, humanities). They also get more easily distracted at home and do not read as much, "for example with online games, most of those are designed for male children, who invest their time in [these games]" (teacher 12, male, Math/sciences). Boys are presented as more prone to distraction, which is directly an effect of things they enjoy, whereas girls are less distractable (if not immune to distraction), and by nature or nurture, show stronger traits that benefit or facilitate their learning.

These perspectives match the available literature in terms of what teachers think about students' behavior, showing a strong similarity between Anglo-Saxon countries and this bilingual Ecuadorian school in terms of teacher perspectives. Mullola et al. (2012) found that teachers see male students as overall less teachable than female students, which could lead to more negative student-teacher relationships and have an effect on academic achievement (p. 199). Martens (2000) also found that male students were more prone to obsess over sports and be considered discipline problems. Jones and Myhill (2004b) describe girls as more accepting of the school ethos, less disruptive, more attentive. This dichotomy reflects teachers' perceptions about gendered interests and nature as well as academic mangement.

Zooming in to literacy-related interests, Martens (2000) and Whitmire (2010) mention the choice of books and the relationship between the author, the protagonist, the reader, and the content or topics tackled in the book. Matching a few or all those (i.e. a male protagonist with a male student, or books by male authors for male students, etc.) could lead to higher interest on boys' part in reading if it includes "aliens, monsters, horror stories, war, drugs, war-related hero stories, accidents, injuries, thugs, and mistakenly hurting something else. And we can't forget a particular favorite: Robots fighting evil characters" (Whitmire, 2010, p. 70). Martens (2000) counteracts with "the assumption is that if the interests and needs of the male students are met, they will be attentive, and that female students will be cooperative and follow along" (p. 37). The authorities at Ents' encouraged teachers to find more literary works written by female, racially diverse authors, yet most books on the reading plan are written by male authors and have male protagonists, varying in genres, and topics. More research would be necessary to assess the impact of reading material on motivation and interest, but this point demonstrates the nuances of discussing gender stereotypes and interests in a school setting: Would measures in order to increase diversity affect boys' motivation to read? What are the implications for our society?

Overall, teachers are attempting to navigate what they perceive are biological factors that may inherently (or not) predispose a gender for a certain kind of learning versus the expectations set upon women especially, versus behaviors they have noticed throughout their experience. However, most teachers sideline gender as an inherent concept, one that does not have a major impact on students' achievement. Once more, tangentially, a missing part in this section is the low achieving girl and the high achieving boy, whose interests and expectations may be outside the conscious scope of how teachers think about their students' genders. They are not the prototypical student for each gender, in a way, they are not the default setting for boys and girls.

3. Gender in teaching practice

This is the overarching theme with the most elements under its wing: Eye-catching tasks, addressing reading or literacy skills, class or groupwork composition, and connections between subjects. It is also the most complex, as it most explicitly begins stepping into territory beyond the design and scope of the study: Methodology, and teaching philosophy and practice. As one teacher said, "…everything boils down to language, not just regarding how we speak, but also regarding nonverbal components of communication" (teacher 11, female, languages). Whitmire (2010) places boys' underachievement directly as faltering

literacy skills, unable to keep up with the current "verbal, college-forward" world where words are needed to solve even math problems (p. 32). In order to address boys' low achievement through language, the basis of everything, teachers state there is more that needs to be done, what they are doing is not enough.

If everything depends on language skills as the basis of all subjects, the world has become more verbal, one of the things teachers can do is explicitly teach literacy skills through all the subjects. These correspond to addressing reading or literacy skills, and connections between subjects. Teachers did not address this idea explicitly, but eight teachers provided comments expressing the need to "increase oral/written/research/reading and vocabulary skills", out of which five were not languages teachers. Whitmire (2010) described a school where the literacy gap between boys and girls was reduced or eliminated, where "regardless of the subject being taught, literacy skills remained at the forefront" (p. 126). Attempting to describe a literacy-forward curriculum for all subjects would require additional research than what this study can provide, but there is a paper (Kirsten, 2019) that states the importance of "how teachers could be supported in integrating literacy teaching with their ordinary subject teaching a way that emphasizes the objectives of the school" (p. 382) as "learning school subjects also implies learning how disciplinary texts are interpreted and created (Shanahan & Shanahan, 2012, in Kirsten, 2019, p. 369).

Some other teachers stress the need to make activities interesting and eye-catching for students, notwithstanding the topic or subject under study. We can take these comments as exemplary: "[We need to] design more attractive classes" (teacher 8 female, language) and "create curiosity about the subject" (teacher 9, male, language). Others address the available skills students have or lack, which could affect the development of tasks despite the level of interest generated by how eye-catching it is: In general, there is a further layer of complexity if the student does not know or does not have the basics in English. So, students who lose interest and stop working will have a lower achievement, and this has nothing to do with gender. (teacher 4, male, languages).

Interesting tasks and their role in learning start stepping into the territory of motivation, which was another factor explicitly addressed by three teachers in relation to task design. "Students need to be motivated" (teacher 15, female, others) equally and teachers should "make it so groups are balanced in regard to gender, promote gender-balanced groupwork" (teacher 12, male, math/science). According to Vantieghem and Van Houtte (2018) there is a relationship between gender (non)typicality and motivation, one that confirms Jones and Myhill's (2004a and 2004b) pattern of disinterested boys and diligent girls. Vantieghem and Van Houtte (2018) did not necessarily look at teachers' role in developing students' motivation, but teachers at Ents' express the possibility of doing precisely so.

As for group composition and/or balance, this study was able to determine that girls' achievement remained higher than boys' through different group compositions while in general representing around forty percent of the school population. The literature reviewed for this study is inconclusive regarding the role of co-education versus single-sex education (Pendleton 2016) versus different percentages of male and female students in classroom performance. There may be an indication that test performance increases where there are more girls than boys, but there were not any test grades in this sample. More research is necessary to completely understand the effects of boys' majority or minority, or single-sex education in Ecuador in order to provide a more specific answer to the teachers who suggested this as a measure to address lower achievement in teenagers.

All of these perceptions represent a model where teachers consider they could have a positive effect on students' achievement, implicitly regardless of gender. All comments on this overarching theme are gender-neutral, with only four mentions of gender explicitly but always as "taking gender and interests into account" or "not allowing for stereotypes" or "diversity of activities for both sexes", never a single comment explicitly addressed as measures taken for boys nor girls in particular, but rather ways to increase achievement for all students. This gender neutrality could be an attempt to enforce gender blindness, which according to Leonard Sax in Whitmire (2010) has made male students less likely to study typically feminine subjects now than thirty years ago, an ironic result (p. 195). This comment was provided in the context of brain differences by sex, and Whitmire argues for following research on brain differences when determining best teaching practices.

Admittedly, Whitmire (2010) referred to a kind of pedagogy that focuses on all students as a "gender-neutral pedagogy" which "works just as well" in reducing the sex achievement gap as one that takes brain differences research into account (p. 97). Teachers at Ents' may be siding more towards a "gender-neutral" pedagogy if given a choice within this particular binary, giving indications for this as early as stating that neither sex has an inherent advantage than the other, and when disallowing "stereotypes" in their practice. The practical implication of this particular discussion brings about a question about the peak performance in 2019-2020: could the school have become more gender-neutral, or more male-friendly?

More research is needed to even begin to answer that question. Some sources (including Whitmire himself) have nonetheless presented factors in teaching practice that also go beyond gender, precisely as the teachers at Ents' would like to do. For instance, Whitmire (2010) found that teachers who were unwilling to let any student fall behind were more successful in closing the gap in achievement between boys and girls. Ranjbar and Narafshan (2016) add onto this conversation with "teachers' instrumental motivation is the most affective factor to increase the students' integrative motivation" (p.20), which could be interpreted as: If teachers feel motivated to be successful at their job, students' motivation will follow suit. Lastly, Drudy (2008) concludes that better teachers should always be the goal regardless of their gender, or the students' gender.

4.4 Discussion

Across all overarching themes, teachers expected boys to perform poorly, and are considered less attentive, less detailed-oriented, naturally weaker readers, more distractable, and needing to meet less societal expectations than girls; society is both more favorable and allegedly at fault for boys' lower achievement. Conversely, girls are seen as more responsible, stronger readers, more mature. Teachers see boys as "lacking," and girls as "having", which could be lacking or having innate talent, teachable qualities, positive disposition, a society to please, etc. This matches Jones and Myhill's (2004b) deficit model of teachers' perceptions about male students, as described in the literature review.

All teachers' comments (except for one teacher who gave them an advantage in science) shed a poor light on boys' behaviors in class, show low expectations on boys, and do not show much surprise at their lower achievement than girls, but an overt claim about potential was not made, it can only be inferred. Part of Jones and Myhill's deficit model (2004b) contends with their own arguments of more boys seen as underachievers due to having higher potential, but not fulfilling it. The impossibility to establish underachievement (by defining it through potential) as opposed to low achievement displays another limitation of this study: More depth in analysis cannot be conducted as students' behaviors and follow-up sessions with teachers were not possible in this project.

This brings up another piece of missing nuance: Whether by design of the survey questions, by a true sense of invisibility, or other unestablished reasons, the teachers never mentioned instances or examples where boys were high achievers and girls were low achievers. Jones (2005) described this as the invisibility of the underachieving girl, supported by Jones and Myhill (2004a and 2004b), a phenomenon where teachers group together all girls as having the same positive qualities and disregard the needs of the underachieving girl. The high achieving boy is considered an outlier, even though underachieving boys and girls share more characteristics with each other rather than peers of the same gender (Jones & Myhill, 2004b, p. 560). As a result, the needs of the underachieving girl are ignored, which has direct implications in teaching practice. Developing measures to balance the achievement of boys and girls or finding causes for it is not part of the goals of this study, but Jones and Myhill's approach of dividing students into four distinct groups could be the base for another study to look into more nuanced perspectives or measures in depth. Combining this quadrant model with determining whether "gender-neutral" or "boy-friendly" methodologies benefit a particular group of students could result in a powerful tool for teachers' self-reflective practice.

Lastly, a serendipitous finding of this study may show that teachers perceptions are shifting away from traditional male and female areas of knowledge, or that those traditional perceptions were never part of their culture(s) in the first place. Voyer and Voyer (2014) established in their meta-analysis that language has been considered a female domain, and sciences a male domain (p. 1174). Ents' teachers' perceptions correspond to the traditionally feminine one when "gendering" areas of knowledge, but not to the traditionally male one. Male students are considered disinterested across the curriculum, and when biological factors were addressed, only one in fifteen teachers gave them the advantage and only in sciences. The sample size of these teachers is too small, and the context (Ecuadorian, middle class students with mostly Ecuadorian, middle-class teachers) is too specific for this to be a generalizable finding, but these perceptions may indicate a switch in traditional views of gender and subjects. It could also be possible that these perceptions switching also corresponded to Anglo-Saxon countries, but it cannot be said for certain without additional, bigger studies on the matter.

CHAPTER 5: CONCLUSIONS

Ents' School follows the trend seen in Anglo-Saxon countries where boys achieve lower scores than girls in language and literacy-related subjects, as established by comparing mean scores by class, cohort, school year. This study has contributed to this conversation by showing that this phenomenon not only happens in L1 subjects as established in the literature, but also to L2 (English as a Foreign Language) in a bilingual school. It has also contributed to contextualizing this phenomenon in Quito, Ecuador, in a middle-class setting. More broadly, it is the first piece of literature in Latin America (as far as the literature found for this study's background) that explicitly addresses sex differences in academic achievement in L2, as well as providing confirmation of boys' lower achievement in L1 and all other subjects in Latin America as well as Anglo-Saxon countries.

Girls' scores always remained higher than boys', which is also reflected by the median score calculations, where eight out of ten of the highest scores in L1 belonged to girls, and seven out of ten in English were achieved by girls as well. Other fluctuations in achievement within L1 and L2 were found. L1 and L2 achievement increased overall from the first school year under study to the last one, with a peak in the 2019-2020 school year, and the best language scores also changed around that year from L2 to L1. This study is not meant to provide explanations beyond teachers' perspectives, but it is clear that a shift happens in the school around 2019, together with changes in medium of teaching, school directions, changes in assessment and curriculum, including Ministry of Education policy. More research on the specific impact of these factors within and without Ents' is necessary to adequately establish the effect they could have on girls' and boys' achievement.

Out of all the studies reviewed for this thesis project, none examined the relationship in achievement in L1 and L2 through the perspective of gender differences. Calafato and Simmonds (2023) and García-Vásquez et al. (1997) examined the relationship between L1, L2, and academic success (among other factors, excluding gender) and did not find any impact on school grades. Some of my findings suggest there might be improvement in non-language subjects based on achievement in language subjects, especially for boys, but a stronger, more focused study on this matter would be needed to establish a clearer relationship. Ents' achievement tendencies provide a snapshot of biliteracy achievement, practices, and trends in Latin America and Ecuador and extends the issue of boys' lower achievement in L2 literacy as well as L1.

This study could be a starting point for gender differences in achievement for other institutions who teach L2, like universities, language institutes, and other (non)bilingual schools. This would necessarily bring in other factors that were not addressed overtly or directly in this study, such as socioeconomic status, type of school (public, private, etc.), differences in methodology, and students' age, to name a few. Ecuador would be a ripe study cite, as it is considered to have one of the lowest levels of proficiency in Latin America, a wide gap between public and private institutions, and old-fashioned L2 methodologies (Sempértegui, 2022). Defining differences in achievement in other languages as L2 (for example, French as L2, or German, etc.) could also be useful in establishing trends or connections between different L1, L2, and achievement by gender.

In terms of teachers' perspectives, this study found close similarities to the views presented in Jones and Myhill (2004a & 2004b), Jones (2005), Parry (2000), Cárcamo et al. (2020), Martens (2000), Mullola et al. (2012) whereby teachers idealize girls as more teachable, with better study habits, and see boys as disinterested, and worthy of lower expectations. High achieving boys and low achieving girls were not directly addressed at all. These low expectations can affect teacher-student relationships and be detrimental for boys' achievement, while completely ignoring the needs of low achieving girls. Underachievement as defined by students who could earn higher marks but do not do so cannot be unmistakably established by the data at hand, simply inferred or implied, needing additional studies to properly conclude it.

Teachers' views encompass academic management and societal factors. Teachers at Ents' discuss "nurture" factors with more saliency than "nature" factors. Additionally, they consider there are measures to be taken in order to balance male and female students' achievement. This finding could give support to the idea of employing a methodology that benefits both girls and boys, as was mentioned by Whitmire (2010) and Sokal and Katz (2008). By finding the right methodology or mix of methodologies, teachers allegedly could help increase the achievement of all their students, regardless of gender, something that supports their wishes as expressed by the survey. In broader terms, teachers in this school may also be showing a shift away from traditional perceptions of male versus femaledominated subjects since male disinterest was perceived to happen across all subjects. More studies need to be undertaken in this matter in order to define whether this is a recent phenomenon, a Latin American/Ecuadorian phenomenon, or if the traditional perceptions in Anglo-Saxon countries were ever a part of Ecuadorian teachers' perceptions and biases. Calafato, R., & Simmonds, K. (2023). The impact of multilingualism and learning patterns on student achievement in English and other subjects in higher education. *Cambridge Journal of Education*, 53(5), 705–724.

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APPENDICES LIST

ANNEX A. Examples of teachers' comments in the surve	y54
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Theme	Definition	Examples
Girls'	Study	"Girls have better organization skills
academic and self-	habits specifically	and study habits; these are more evident in the
management skills	ascribed to girls	girls [as opposed to the boys] so their English
		acquisition is improved."
		"Girls are more disciplined, detailed-
		oriented, and follow the instructions."
		"At those ages, girls work more
		independently."
		"They have reading habits, which
		strengthens spelling and grammar [in Spanish
		and English]."
		"Girls focus better."
Societal	Appeals	"Girls tend to make more effort in
expectations and	to expectations set	order to meet society's expectations [of
stereotypes	by society or	them]."
	mention or	"Socio-cultural factors make [studies]
	stereotypes	less demanding for boys rather than girls."
		"Culturally, [society] has instilled in
		[boys] activities that do not entail observations
		nor analysis."

ANNEX A: EXAMPLES OF TEACHERS' COMMENTS IN THE SURVEY

	1	
		"Gender is not a factor in [girls'
		higher achievement] but rather social
		constructions around gender, for example girls
		need to meet more expectations."
		"Gender is a stereotype."
		"[Boys have lower grades in
		Literature compared to English] because of
		societal acceptance due to scores."
Appeal to	Mentions	"Cognitive and intellectual capacity
Nature and Science	of research,	is not linked to gender's biological qualities."
	phrases in the gist	"Natural acquisition of [the Spanish]
	of "by nature," or	language makes it so that everyone needs to
	biology	reach an ideal skill in it for either gender."
		"At those ages [teenage years], girls
		work more independently."
		"Verbal skills are developed earlier in
		girls, which is why I think they have better
		language skills."
		"Some of the research I've looked
		into assert that males are better in math and
		science due to their development and role in
		evolution."
		"Girls mature earlier than boys and
		they focus on their priorities since younger."
L	1	

L	1	
		"Boys have a kind of reasoning best
		fit to exact sciences."
		"Both men and women have innate
		skills, but they have to be developed in
		different ages: Infancy, adolescence, and
		adulthood."
		"[Math, reading, language, and
		science] skills are independent of sex, other
		factors (such as genetic or environment ones)
		influence on each individual's skills."
		"Girls have natural skills [for
		achieving higher grades than boys]."
		"Neuroscience studies have shown
		many times that girls' closed feelings
		influence on their better organization."
Personal	Appeal to	"Students who make the most of each
and academic	students'	subject are those who want to learn regardless
engagement and	individual sense of	of gender."
interest	responsibility and	"Studying depends on responsibility,
	personal	(and level of commitment) not gender."
	connection to the	"Girls' values, level of responsibility,
	subject(s), usually	and knowledge have turned into higher
	in opposition to	scores."

	general comments	
	about gender	
Connections	Links	"Reinforcing the native language
between Subjects	teachers see	helps relate to the second language."
	between two or	"Low scores in the native language
	more different	makes the second language be seen as
	subjects	negative or very difficult."
		"It's not the same [to learn] Literature
		than learning a language that puts you in
		contact with other cultures [boys' lower
		achievement in Literature compared to
		English] could be the lack of a correct vision
		regarding how much Literature can give us as
		human beings."
		"Studying Literature requires more
		dedication than a language [explaining boys'
		lower achievement in Literature compared to
		English]."
		"everything boils down to
		language, not just regarding how we speak,
		but also regarding nonverbal components of
		communication."
		"One must master one's native
		language in order to acquire another one, any

		shortcomings in the mother tongue will affect
		another language."
		"It is necessary to raise awareness
		about the importance of literature."
		"Usually these subjects [English and
		Literature] are not considered useful, we need
		to show the real usefulness of the subjects and
		forget strictly theoretical classes."
		"[Girls have higher scores in
		Literature] because it's the language we use."
Boys' or	Study	"Boys do not like to read; they do not
gender-unspecified	habits specifically	make the time for it."
habits and skills	assigned to boys,	"There is no difference in gender
	or to neither boys	because as long as you develop skills with
	nor girls	everyone, there is no reason for them to be
		different."
		"[Subject scores] depend a lot on
		your study habits."
		"Reading and writing habits have a
		lot to do [with scores in Literature or English]
		in contrast with other activities or likes boys
		have."
		"[We need to] strengthen reading and
		writing habits, and generate habits to acquire

		and analyze information [in order to help our
		students]"
		"[We need to] encourage study
		habits."
		"Boys have fewer reading habits."
Perceived	Interests	"I have noticed that girls are more
gendered interests or	or natural	receptive to learning a second language and
nature	characteristics that	have better skills for it."
	teachers attribute	"[Boys have lower scores in my
	to one or another	social sciences class] maybe because they
	gender	think the subject is not important."
		"Girls are more observant and
		detailed-oriented, and boys are more interested
		in things like sports, not so much English or
		Literature."
		"Many girls are more analytical and
		observant."
		"Boys usually focus on more sportsy
		or manual activities."
		"[Girls' higher scores in Literature
		than English respond to] a better affinity with
		reading and better communication skills. Boys
		are the opposite."

"Groups where I have taught classes
have more girls than boys, [that's why their
scores are higher than the boys]."
"The girls' historical role makes them
better in communication, comprehension, and
in these [languages] kinds of subject."
"I do consider gender to have an
influence, for example in learning languages, I
think girls tend to notice ambiguity in the
messages more easily, and they also
demonstrate higher creativity when
developing a task."
"Girls are more devoted to studying,
that's why they usually have higher averages
than boys."
"[Boys] do not choose these
[languages] as priorities."
"I think girls are more inclined to
reading, as current distractors at home like
online internet games, most of them are
designed for boys, who invest their time in
online gaming."
"Girls are more sensitive; they are
concerned about their peers and nature."

		"Cirls care a lat man all and their
		"Girls care a lot more about their
		performance."
		"Girls show more dedication and
		boys only usually pay attention at the end [of
		the school year] ² ."
		"Boys are usually more sociable and
		have better communication skills [in response
		to why boys achieve lower averages even
		though they represent the majority of
		students]."
		"[Girls] like reading better."
Solution:	Making	"We need to make more eye-catching
Eye-catching tasks	tasks interesting	tasks." (Female, Humanities, teacher 1)
	for students	"Classes need to be more eye-
		catching, while they make space for reflection
		and analysis." (Male, language, teacher 5)
		"There needs to be a diversity of
		activities that are appealing to both serves "
		activities that are appealing to both sexes."
		(female, language, teacher 5)
		(female, language, teacher 5)
		(female, language, teacher 5) "We need to make more appealing

 $^{^{2}}$ By context, I am assuming this means "at the end of the school year". However, this was not clearly and explicitly specified and could mean the end of a class, the end of their schooling year, the end of a semester, etc.

Actively	"[To help our students, we need to]
mentioning	reinforce reading and speaking and motivate
reading or literacy	our students." (Female, Humanities, teacher 2)
skills	"[In English] there is a layer
	complexity if the student doesn't know or
	lacks basics in English. Students may lose
	interest, will not work, and their scores will be
	low, and this has nothing to do with gender."
	(Male, language, teacher 4)
	"[To help our students, we need to]
	boost speaking and writing skills, and
	research." (Female, language, teacher 11)
	"[To help our students, we need to]
	strengthen new vocabulary and encourage
	reading spaces." (Female, "Others," teacher
	13)
	"[To help our students, we need to]
	encourage reading." (Female, "Others,"
	teacher 15)
How	"[We need to] use strategies where
classes and	gender is not an organization criterion."
groupwork tasks	(Male, humanities, teacher 3)
are designed	"Classes must be balanced in terms of
	gender, and we need to encourage balanced
	mentioning reading or literacy skills

groups [for groupwork] in terms of gender."
(Male, math or science, teacher 12)
"During classes, I motivate students
equally, so they achieve good scores equally."
(Female, "others" subject, teacher 15)