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INVESTIGATING THE ACADEMIC IMPACT OF EMBEDDED TUTORING
AND COLLEGE READINESS ON COREQUISITE
GATEWAY ENGLISH COURSES

by

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ABSTRACT

INVESTIGATING THE ACADEMIC IMPACT OF EMBEDDED TUTORING AND COLLEGE READINESS ON COREQUISITE GATEWAY ENGLISH COURSES

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University of Houston-Clear Lake, 2021

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The purpose of this study was to determine the impact of embedded tutoring and college readiness on students' academic outcomes in corequisite gateway English courses at a Texas community college. With the growing implementation of corequisite gateway classes in higher education to expedite students' academic tenure, schools are looking to implement academic support mechanisms that increase learners' academic achievement and retention rates. A Texas community college used embedded writing tutors as a means of academic support during the school's implementation of the corequisite gateway English course model. Archival academic achievement data were collected on different groups of students who participated in regular and corequisite English courses where embedded tutors were and were not present to gauge the tutors' and students' college readiness impact on the students' academic outcomes. In addition, qualitative information was gathered from interviews with the instructors and students who participated in corequisite gateway English courses on their perceptions of the embedded tutors.

Quantitative findings indicated that college readiness was a good predictor of students' academic success in a gateway English course and that the corequisite model was having the intended effect of helping non-college ready students earn their initial credits faster. The quantitative research also indicated that embedded tutoring had a minor impact on improving students' academic outcomes. This finding was confirmed through the qualitative data analysis that showed faculty and students both have a positive impression of the embedded tutors' classroom presence. However, the students shared they hardly utilize the embedded tutors' services.

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CHAPTER I: INTRODUCTION

Research has long proven that the more credits a student earns in their first year of higher education, the more likely they will complete a degree or credential (Community College Research Center, 2016; Tinto, 2017). A study published by the Department of Education in 2006 indicated that 82.3% of students who complete composition credits before the end of their second year graduated from four-year institutions, versus 53.4% of students who did not (Adelman, 2006). Yet, a common barrier to students earning their initial credits in English gateway courses has been learners falling below their state's prescribed college readiness (academic ability) level that is necessary to enroll in college credit-bearing courses (Baily et al., 2010), as diagnosed by various placement exams (College Board, 2017, 2020). While issues have been noted with these exams not providing a holistic view of the academic abilities of incoming students (Guha et al., 2018; Kuh, 2006), they have still been well documented in their accuracy in student course placement and utilization by large swaths of schools (Burdman, 2012; Hodara et al., 2012; Horn et al., 2014; Venezia et al., 2012).

Higher education's traditional response has been to enroll these students into developmental English courses that aim to increase learners' academic abilities in the identified need areas (Herman et al., 2017). However, these developmental courses prolong the amount of time, anywhere from one to three semesters, that it takes a student to earn their first college credits and do not always lead students to further academic progression, particularly at community colleges (Caron, 2019).

According to Chen et al. (2020), up to 65% of first-time community college students took at least one remedial class within six years of enrollment. Although the number of students taking developmental courses at four-year schools is significantly

lower, the retention rate is similar with 58% of developmental English students not moving on to credit-bearing courses (Complete College America, 2017). Student success and retention have become the focal points of colleges and universities across the United States, with institutions updating the traditional developmental course model to get developmental students through credit-bearing classes sooner, such as enrolling students in the developmental and credit-bearing English courses at the same time (Bael et al., 2015). Many schools connect their existing academic support outlets, such as writing centers, to their corequisite courses to support students with the increased workload (Marhsall & Rasmussen, 2021; Webster & Hansen, 2014).

Since the 1940s, Writing Centers have served as outlets to help students work through writing-intensive courses such as English (Boquet, 1999). These centers hire and train writing tutors to offer different specialized forms of writing tutoring (Bleakney et al., 2020; Cheatle & Sanchez, 2021), such as one-on-one tutoring sessions, supplemental instruction, workshops, resume reviews, and embedded course tutoring. Embedded course tutoring involves assigning content area tutors to specific sections of challenging classes, such as gateway English courses (Carpenter et al., 2014). This provides services that are tailored to that specific course, with the tutor being present for lectures and working closely with the course instructor (Hannum et al., 2014).

During the deployment of a corequisite English gateways course (CGEC) model at a midsized community college in the suburbs of a metropolitan Texas city, the decision was made to use embedded course tutors, provided by the campus Writing Center, as a means of offering academic support that met the students where they were to increase student academic success and retention. This chapter discusses the need for a detailed analysis to be conducted on them. A research problem and purpose are established, key

research questions that guided this study are posed, and key terms are defined to highlight the critical identifiers in this study.

Statement of the Problem

Many students across the U.S. are entering college unready to handle the academic rigors of higher education (National Center for Education Statistics, 2011). This has long been assessed by college readiness exams, such as the ACCUPLACER OR COMPASS (Primary Research Group, 2008). Developmental education courses have long been the typical response to this problem. Historically, college-preparatory classes have often taken semesters, even years, for students to complete and have stood in the way of students earning their desired academic credentials (Tinto, 1998, 2017). In addition to adding to the amount of time a student spends in college, these classes do not always lead to more students completing credit courses. This fact has been documented by numerous studies (Adams, 2020; Blaauw-Hara et al., Boatman & Long, 2018; Carter, 2018; Goudas & Boylan, 2012; Turk, 2019; Valencia-Glenn, 2016). In a study run at Northern Marianas College, 80% of their incoming students were placed into developmental English classes, researchers monitored those students for eight semesters, and only 39% of those who needed English remediation earned their initial course credit in English (Herman, 2017). Numbers like these are more the rule than the exception at community colleges and universities across the country (Hern, 2012; Wilmer, 2009; Getz, 2003). Yet, these classes are considered necessary for underprepared students to be successful in finishing their initial college credits (Boatman & Long, 2017).

Vandal (2016) states that “failure is not due to a student’s ability to learn college material, but because they fail to enroll in the next course in their developmental course sequence.” While colleges must continue to support their students with developmental coursework needs (Bosley et al., 2021), this model adds significant time and cost to

students, which creates a “massive disincentive to pursue a college credential” (Vandal, 2016, p. 11). These issues have been further compounded by the challenges that the COVID-19 pandemic presented to higher education, which moved practically all instruction completely online, even for developmental classes (Yokus, 2022; Kwakye, 2021). According to the THECB (2021), total higher education enrollment for the state of Texas was down 4.1% from 2019 (1,560,748) to 2020 (1,496,552), possibly due to the pandemic. To continue to offer these courses and expedite the time needed for students to complete them, many colleges have begun offering these developmental classes as corequisite courses attached to a student’s initial college credit classes (Adams, 2009; Atkins & Beggs, 2017).

One of the first states to see the implementation of such a program was Tennessee (Smith, 2016). The initial deployment of the corequisite model for math classes at Austin Peay State University saw a dramatic increase from less than 10% of their students completing a credit math class in their first three to four semesters, to over 70% in a single semester (Office of the Vice-Chancellor for Academic Affairs, Tennessee Board of Regent’s Office, 2016). The University achieved this by eliminating developmental courses and enrolling students who were not college-ready in the standard gateway course while requiring two hours of mandatory content area tutoring weekly (Vandal, 2016). With such promising outcomes, many colleges across the state adopted corequisite remediation models as well. They were just as successful as the initial test group at Austin Peay; 66.9% of the students earned a passing grade in the English class in their first semester compared with 30.9% under the sequential course developmental model (Office of the Vice-Chancellor for Academic Affairs, Tennessee Board of Regent’s Office, 2016). The final unique feature of the corequisite model deployed in these cases was the required specialized academic support for both the math and English classes,

which other higher education institutions emulated in their deployments (Christie & Gaillet, 2020).

Once the State of Tennessee published the successful results of their corequisite course initiative, other state legislatures, including California, Colorado, Connecticut, and Indiana, started passing acts to encourage higher education institutions in their states to adopt similar practices in the early twenty-teens (Education Commission of the States, 2021). Texas passed a state law that mandated the gradual implementation of corequisite classes for 75% of all developmental courses taught in the state by 2020 (Texas State Legislature, 2017). While there were subtle differences between the different implementations of corequisite remediation, the two common factors were (1) significantly decreasing the time needed for students to complete developmental courses by eliminating classes, and (2) offering specialized academic support to address the identified knowledge deficiencies (Adams, 2020; Atkins & Beggs, 2017). Some schools adopted support models like the method used at Austin Peay, where non-college-ready students enrolled in the credit course immediately with mandatory tutoring at regular intervals (Vandal, 2016), while others compressed their traditional developmental course instruction to the first few weeks of the semester (Logue, 2018).

A midsized community college on the outskirts of a major Texas city began mandatory enrollment in corequisite gateway classes for students testing below college-ready in math, reading, or writing at the beginning of fall 2017. Students coming into the college without previous coursework were assessed via the Texas Success Initiative Assessment (TSIA), a college readiness exam used commonly across the state. Students testing as not college-ready in reading or writing were enrolled in a pair of English classes simultaneously. One was the college's gateway English credit course (ENGL 1301) and the other a developmental class (IRW 0320) that would support the students'

efforts in the credit portion. These classes would be taken simultaneously over an entire semester. The school also incorporated embedded writing tutors who would attend both classes to offer academic support to bolster student success, much like the similar model piloted by Oakland University (Alba, 2014). Individual course instructors incorporated different ways of utilizing the tutors during class time, including open writing-lab time where the students could work one on one with the tutor, guided writing workshops that were co-run by the tutor and instructor, and essay spot-checks where the tutor would work with students to ensure they were responding directly to essay prompts during class time. Outside of these specialized exercises and tutor presence, these were no different from a course section taught to college-ready students.

The deployment of this CGEC model at the target community college of this study (fall '17–spring '18) yielded gains similar to the schools in Tennessee, with 70% of the students completing their English credit course versus 47% of the previous academic year, which used the traditional developmental model (Templer et al., 2019). Some CGECs could not have embedded tutors in the following semester due to a lack of tutor availability. Interestingly, there was not always a significant difference in completion rate between students in CGECs with or without tutors. This begs the question, was tutor class presence making a substantial difference in students' academic performance or was it the updated remediation course model?

The data discussed here indicates that when corequisite remediation is introduced to college campuses, it brings a higher level of success in students completing their gateway courses in their first semester (Logue, 2018). However, there are different means of implementing these updated developmental course models and multiple forms of academic support that schools can offer. The growing implementation of corequisite remediation at colleges across the country facilitates the need for robust academic

research to be conducted on the different types of academic support that are used in these models (Belfield et al., 2016).

Studies have already been conducted on small test groups of students taking different forms of corequisite remediation, with a mix of qualitative and quantitative approaches for English courses (Hannum et al., 2014; Alba, 2016; Schubert, 2017). However, not many of the studies of CGECs employ a quantitative component that analyzes a sizeable student population to offer statistical analysis to complement their qualitative findings. Most of the studies conducted compare student success rates of schools' traditional developmental course models with the success rate of their newly implemented corequisite remediation model. Few analyze student populations that are only enrolled in corequisite remediation classes, where some sections have specialized academic support, such as an embedded tutor, and other class groups do not. Also, many of the studies do not include means to measure the effectiveness of using the current battery of college readiness exams as means for placing students into these new corequisite models. This establishes a gap in the literature concerning the statistical analysis of a large student population in CGECs that focuses on specialized academic support, creating the need for further study.

Significance of the Study

In this time of increased public scrutiny over how community colleges and universities are using their financial resources inspired by ever-increasing tuition costs, many schools are beginning to consolidate their multiple tutoring centers under a singular leadership structure to provide easier access to academic support services and lower oversight costs. This requires tutoring center leadership and faculty to focus on offering their students high-impact practices that feed into the college's overarching goals of

increasing student retention and decreasing a student's time to complete a credential (Chosed, 2017).

In addition, higher education institutions are also dealing with enrollment numbers that have flatlined or decreased (Barrow & Davis, 2012), which has been further exacerbated by the COVID-19 pandemic (Yokus, 2022; Kwakye, 2021). These lower enrollment numbers are weighing against many states' needs to fill more jobs that require credentials beyond high school diplomas or GEDs, with the Texas Higher Education Coordinating Board (2015) predicting that 60% of all professions within the state will require a college degree or certificate by 2030. To meet this ongoing challenge, the State Higher Education Coordinating Board (2015) proposed their 60x30 plan, which aims to equip 60% of Texans ages 25-34 with a degree or certificate by 2030. As of 2017, 54% of students entering Texas community colleges needed developmental coursework (Smith, 2017), so corequisite remediation with specialized academic support will be integral to achieving that goal (Texas Higher Education Coordinating Board, 2020). To that end, the state legislature passed a law making it mandatory for all community colleges and universities in Texas to start using corequisite remediation, in some form, for at least 75% of their developmental course offerings (Texas State Legislature, 2017).

Corequisite remediation helps alleviate rising tuition costs/debt for students and decreases the number of classes and time it takes students to finish their credentials (Adams, 2020; Atkins & Beggs, 2017; Belfield et al., 2016). This leads to a higher chance of students completing their desired credentials, and it better equips the workforce of tomorrow with the education they need today (Carnevale et al., 2020; Community College Research Center, 2016). The importance of this to higher education, particularly community colleges, cannot be understated (Tinto, 2017; Carnevale et al., 2013).

Different types of academic support – individual tutoring, supplemental instruction, and

embedded tutoring – can be deployed to help fulfill these requirements (Alba, 2016; Carpenter, 2014; Epstein & Draxler, 2020). Colleges need access to detailed research that discusses the effectiveness, or lack thereof, of unique implementations of these specialized academic support methods concerning the corequisite remediation models (Chosed, 2017). Simply implementing corequisite remediation models, without providing the necessary level of additional academic support, might lead to the stagnation of the improvements that are being made with college completion rates around the country (Education Commission of the State, 2021). This could lead to the loss of significant economic opportunities for developmental students and further feed the ever-increasing amount of student debt that plagues students who do not finish college (Carnevale et al., 2013; Grobman & Spigleman, 2005).

Research Purpose and Questions

The purpose of this sequential mixed-methods study was to examine the influence of embedded tutoring and college readiness on student academic achievement in corequisite gateway English courses at a community college. The following research questions will guide this study:

1. Is there a statistically significant mean difference in academic outcome for ENGL 1301 students based on college readiness?
2. Is there a statistically significant mean difference in academic outcome for ENGL 1301 students based on tutor class presence?
3. Is there a relationship between college readiness and ENGL 1301 student academic outcomes?
4. Is there a relationship between tutor class presence and ENGL 1301 student academic outcomes?
5. To what extent are tutor class presence and college readiness predictive of students' academic outcomes in ENGL 1301?
6. How do the ENGL 1301 instructors perceive having an embedded tutor in the course?
7. How do the ENGL 1301 students perceive having an embedded tutor in the course?

Definitions of Key Terms

This is a list of the key terms that were pertinent to this study:

Academic Outcome – Academic outcome, for this study, was defined as the letter grades students who complete ENGL 1301 earn, with letter grades of A, B, and C being considered successful outcomes, and letter grades of D and F being considered unsuccessful outcomes.

College Readiness – College readiness was defined as an ability metric for reading and writing assessed via an academic ability test (TSIA, SAT, etc.) before students start their college coursework or complete a gateway English college credit course. If the metric was met in both of those competencies, the student was considered ready to perform at a college level in credit courses (College Board, 2017, 2020; Primary Research Group, 2008). The Texas Higher Education Coordinating Board (THECB) sets the cut scores of the TSIA for where college readiness is determined for a specific subject, but individual schools manage their developmental education practices and policies. At the college where this study was conducted, a student had to attain college-ready scores in both reading (351) and writing (340 multiple-choice, and 4 on the essay) to enroll in a stand-alone ENGL 1301 composition one section. If a student scored a 342-350 or an ABE score of 5 or 6 on the reading portion of the exam, they would be required to enroll in a CGEC. If the student earned a 340-349 or an ABE score of 5-6 with an Essay score of 2-3 on the exam's writing portion, the student would be required to enroll in a CGEC as well. If a student falls below those thresholds, they are then placed into an ABE course that, if passed, will put them into a CGEC course.

Corequisite Gateway English Courses (CGECs) – Corequisite Gateway English courses were defined as the IRW 0320 Advanced Integrated Reading and Writing college-preparatory classes and ENGL 1301 Composition 1 credit courses that non-college-ready

students were enrolled in. Not all paired course sections were taught by the same instructor, and/or had tutors present.

Course Outcome – Course outcome was defined as a student’s participation in a gateway English course (ENGL 1301). This could be a status of nonsuccessful (withdrawal, or a failing letter grade of D or F) or successful (a passing letter grade of A, B, or C).

Embedded Tutor – Embedded tutor was defined as a writing tutor integrated into CGEC to provide direct tutorial support to students in the classroom (Carpenter, 2014).

Tutor Presence – Tutor presence was defined as a tutor’s presence in the ENGL 1301 Composition 1 and IRW 0320 Advanced Integrated Reading and Writing sections.

Conclusion

There is growing pressure across the U.S. for community colleges and universities to increase their graduation rates and decrease the average time it takes a student to complete a degree as tuition rises nationwide (Maldonado, 2018). Corequisite Gateway English Courses paired with supplemental academic support programs have become a prominent strategy used to achieve both items. However, there is not as wide a breadth of research to indicate the same for academic support and college readiness measurement for CGECs. Chapter II will examine how students’ college readiness is assessed, how it is used to place them into courses, and the pitfalls of historic developmental course models. It will then explore studies and articles on corequisite course models, their implementation efforts at various institutions, and their effectiveness, focusing primarily on English courses. Finally, it will also discuss literature on writing centers' current types of services, particularly embedded tutoring.

CHAPTER II: REVIEW OF THE LITERATURE

In 1975, Tinto indicated there was a direct connection between a student's level of college readiness and their ability to successfully integrate into college, succeed in earning their initial course credits, make steady progress to their desired credential, and ultimately earn that credential. In his most recent work, Tinto (2017) further hones that point by saying that institutions must do what they can to encourage student persistence by fostering a student's self-efficacy and their sense of belonging to campus through the lens of what they are being asked to learn through the curriculum. Because of this ongoing conversation in higher education and the rising pressure for colleges to decrease the amount of time it takes students to complete a credential, corequisite course models have arisen (Belfield et al., 2016) as a remedy to answer the systemic problem of long developmental course pathways (Bailey et al., 2010; Turk, 2019). Corequisite course models take on several different forms to accommodate the increased amount of work expected of developmental students, and colleges are updating their current means of course placement (Atkins & Beggs, 2017; Bosley et al., 2021) and deploying academic support to help students achieve successful educational outcomes (Alba, 2016; Adams, 2020). The purpose of this study was to determine if the college readiness measures and embedded writing tutoring method that were used to support a Corequisite Gateway English Course (CGEC) model were effective in achieving this end. This literature review analyzes the key elements that are related to CGECS: (a) the concept of college readiness; (b) developmental course models; (c) corequisite course models; and (d) the utilization of academic support to increase student success in corequisite gateway courses.

College Readiness and Developmental Courses

The conversation surrounding developmental course pathways begins with the term *college readiness*. Conley defines college readiness as “the level of preparation a student needs in order to enroll and succeed, without remediation, in a credit-bearing general education course at a postsecondary institution that offers a baccalaureate degree or transfer to a baccalaureate program” (2017, p. 5). While there may be some minor differences in the state-to-state definition of college readiness (Mishkind, 2014), there is consensus that the focus of the term is derived from a student’s ability to complete the core learning objectives outlined in their initial college classes (Malin et al., 2017). Thus, college readiness is a student having the basic skills that are necessary to complete an entry-level college course (Gaertner et al., 2015), highlighted as one of their initial key accomplishments by Tinto (2017) to remain on track to receive their ultimate credential. In conjunction, Kuh et al. (2006) discuss some of the factors that can affect a student’s college readiness – such as precollege academic preparation and achievement, family income level, and parents’ higher education attainment or lack thereof. Therefore, it is not a student’s academic ability alone that will equate to their college readiness status, but also many facets of their life over which they do not have direct control (Guha et al., 2018).

Factors Affecting College Readiness

As noted by Kuh (2006), some of the most cited factors affecting college readiness are a student’s socioeconomic background, first-generation status, or if they are defined as nontraditional. Regarding the primary reason for students’ college readiness status being affected by their socioeconomic background, some researchers have stated that wealthier students have more advantages in their primary education than their less socioeconomically secure counterparts (Bragg & Taylor, 2014). The main reason for this

is the disparity in the level of access that high-socioeconomic-status students have to quality primary education instruction and supplemental educational resources such as individual tutors (Merritt & Bulbotz, 2015). Despite this, studies have shown that colleges can take action to minimize the socioeconomic achievement gap, particularly by providing strong social support for students through faculty members and support staff (Morales, 2014).

In addition to their socioeconomic background playing a large role in affecting their college readiness, studies have also shown that a student's status as first-generation (first from their family) to attend college has played a significant role in being deemed as not college-ready (Byrd & MacDonald, 2005). Students who have life experiences with family members who have a college education show improved academic, time management, goal-setting, and self-advocacy skills throughout their tenure as students versus those who do not have those familial examples (Byrd & MacDonald, 2005). First-generation students largely expressed the sentiment that they felt like their exposure to the types of skills that made them successful in college were not as clearly demonstrated to them by their families or their instructors during their primary education (Reid & Moore, 2008). However, just as with the socioeconomic achievement gap that was mentioned, educational institutions can work to counter these skills gaps for students with strong social and academic support (Banks, 2018; Royster et al., 2015).

Finally, it has also been shown that bearing the status of nontraditional and being 24 years or older, together with not having gone into higher education immediately after primary school, can also have a strong impact on a student's level of college readiness (Jinkens, 2009). What is interesting about this status versus the previous two is that many incoming college students who bear the moniker of nontraditional are also from low socioeconomic backgrounds and/or first-generation (Cataldi et al., 2018; Dill & Henley,

1998). Thus, it often works out for these students that while their initial academic knowledge might not be quite as strong as their college-ready peers, they need less in the way of academic skill instruction to become successful college students (Jinkens, 2009). Given all these external factors, the question to ask becomes, How are colleges measuring these pieces of information?

College Readiness Measurement and Usage

One of the most common ways to diagnose a student's college readiness is performance on specially designed college aptitude tests. Some of these exams include holistic views such as having students create graduation portfolios of their work that are evaluated much like a dissertation (Guha et al., 2018). However, many schools will rely largely on an applicant's performance on one of a select few college entrance exams that focus primarily on a student's rote academic ability (Venezia et al., 2012). Horn et al. (2014) discuss some college placement exams' ability to measure students' academic skills in the areas of reading, writing, and math such as the ACCUPLACER by College Board and the COMPASS by ACT (Primary Research Group, 2008). Students who earn a high enough test score are deemed "academically prepared" and placed into a college-level course (Hodara et al., 2012). While there has been some success using these primarily exam-based approaches to college readiness diagnosis and class placement (Horn et al., 2014), it continues to be argued that higher education needs to take a more holistic approach to class placement by considering some of the previously discussed student characteristics (Burdman, 2012).

Like the states examined by Horn et al. (2014), Texas uses a college readiness exam called the Texas Success Initiative Assessment (TSIA), developed by College Board. In validity testing of the TSIA with a sample size of over 21,000 students across a myriad of Texas institutions, Cui and Bay (2016) concluded that students who made the

recommended cut scores for both English and math had a higher likelihood of passing the respective gateway classes when compared with their peers who did not. In addition to the cut scores, the Texas Higher Education Coordinating Board (THECB, 2017) also allows for students to achieve college readiness status via other means, including completion of specific courses at accredited institutions, being an active or retired member of the armed forces, or prior completion of an associate's or bachelor's degree. These practices are also employed, though sometimes in slightly different fashions, at other campuses across the U.S. (Horn et al., 2014; Hodara et al., 2012; Burdman, 2012).

Since the turn of the twenty-first century, there has been an increased level of conversation about using other means of assessing students' college readiness beyond just college-readiness testing (Noble et al., 2003). High school GPA is cited as one of the other multiple measures that are a good source for assessing a student's college readiness (Ganga et al., 2019); students earning a 2.5 or better in a subject on a 4.0 scale are more likely to pass the associated entry-level college credit course (Cullinan, 2020). GPA has also been said to be a more holistic measure of a student's academic ability as it incorporates academic experiences beyond that of a single exam (Ganga et al., 2019, Cullinan, 2020). Therefore, as determined by one or more of these criteria, students would be placed at a "starting line" for their college coursework, whether developmental or credit-bearing.

Developmental Course Placement

Often with college-readiness exams, the cut-off scores for college readiness are determined by individual campuses and/or states in which they fall (THECB, 2017). If a student does not reach the score necessary to test as college-ready, their score can be used as a diagnostic score to measure which level of a developmental course they would need to be placed in (Fields & Parsad, 2012). The spirit of these developmental classes lies in

remediation, which, according to Lundberg et al. (2018), plays a critical role in helping students identified as first-generation, low socioeconomic status, or academically at risk. Developmental course placements may be one or more levels below college level, depending on predetermined cut-off scores for each class (Horn et al., 2014).

In the opening of a report prepared by Complete College America (2021), the writers discuss some of the shortcomings of this model: “these courses do not count towards a degree, add additional time to the degree pathway, do not recognize the strengths that students possess, and do not follow demonstrated best practices that lead to academic success” (p. 5). As is clearly stated, the historical model of developmental courses has increased the amount of time it takes a developmental student to complete a credential, costing the student the valuable resources of money, time, and energy, while not always leading to their desired credential (Boatman & Long, 2018; Calcagno & Long, 2008; Martorell & McFarlin, 2011; Scott-Clayton & Rodriguez, 2012). There is also the danger of students falling into the purgatory of these lower-level developmental courses and never rising into the associated credit-bearing classes (Jenkins & Bailey, 2017).

A significant portion of students are deemed as not college-ready, with over half of all first-time college students in the U.S. requiring some type of developmental coursework (Complete College America, 2017). This is especially true for students of color, who come from low-income backgrounds, and whose family members do not have a high familiarity with higher education (Lundberg et al., 2018; Moss & Yeaton, 2013). Developmental education course pipelines have long been assessed as the most significant obstacle to student success because they hinder students from enrolling in credit classes (Center for Community College Student Engagement, 2016; Jaggars et al., 2013). One of the most common and widely praised means for course placement is college readiness assessments and their designated cut scores (Horn et al., 2014). These

instruments are designed or implemented with a specific college's gateway course models to offer an informed view of a student's placement or starting point on that course pathway (Bailey et al., 2010).

Historic Developmental Course Models

With such a significant amount of the student population requiring developmental coursework, particularly at community colleges (Smith Morest, 2013), this has become a mainstay in higher education (Koch et al., 2012; May et al., 2021; Moss et al., 2014). A study conducted by Bailey, Jeong, and Cho (2010) examined the actual course completion rates of students referred to developmental classes. Of the 57 colleges that were part of this study, 40 of them had two or more developmental language classes in which students could place, according to each institution's unique college readiness metrics (Bailey et al., 2010). Similarly, Roska et al. (2009) examined 24,000 students in Virginia community colleges, during the early 2000s, and concluded that roughly half of those students who tested into developmental classes never enrolled in the corresponding credit-bearing course. The schools in these studies are not alone as schools in similar studies shared the trait of having sequential developmental course pipelines that non-college-ready students had to complete before starting their academic coursework (Dell-Amen & Rosenbaun, 2002; Moss & Yeaton, 2013; Tighe et al., 2021). Assuming the students were taking one class per semester, it could take over a year to complete this course sequence. As discussed earlier, the longer it takes a student to complete their initial credits, the less likely they will earn their credential (Tinto, 2017). Bailey et al. (2010) demonstrated that the higher the number of developmental courses a student takes, the lower their actual success rate of completing the course sequence, as shown in Table 2.1.

Table 2.1

Student Progression Among Those Referred to Developmental Education at Achieving the Dream Colleges

Developmental course referral	Never enrolled in developmental education	Did not complete-never failed a course	Did not complete-failed a course	Completed Sequence	Total (N)
Math					
Level I	37%	2%	17%	45%	59,551
Level II	24%	13%	32%	32%	38,153
Level III	17%	23%	44%	17%	43,886
Total	27%	11%	29%	33%	141,590
Reading					
Level I	33%	5%	12%	50%	22,361
Level II	21%	13%	24%	42%	28,015
Level III	27%	09%	25%	29%	27,773
Total	30%	8%	16%	46%	78,149

Note. From Bailey, T., Jeong, D. W., & Cho, S. W. (2010). Referral, enrollment, and completion in developmental education sequences in community colleges. *Economics of Education Review*, 29(2), 255-270.

Table 2.1 shows that just under one-third of the students placed into a developmental class never actually took the class. Of those who did take the course sequences, 29% of all students referred to math and 16% of those referred to reading either failed or withdrew from a course (Bailey et al., 2010). Less than half of the students referred to developmental education courses completed the entire developmental course sequence, with around 30% not enrolling in developmental classes at all (Bailey et

al., 2010). Subgroups that were exceptionally less likely to complete developmental course sequences were male, nontraditional, African American, part-time, or vocational (Bailey et al., 2010). Similarly, Roska et al. (2009) found that only three-quarters of the students who took developmental English classes passed, and only half of the students who took developmental math classes passed.

In addition to students taking longer to complete developmental classes, there is also the social stigma that comes from the notion of being labeled as inadequate for college success (Kilgo et al., 2018; McFadden, 2016). Despite their shortcomings, some parties argue these developmental classes can be a valuable tool for increasing access to higher education for at-risk groups such as students in minority groups, those who come from lower socio-economic backgrounds, and/or who are first-generation (Boylan, 2002). Thus, schools have begun implementing different course models that incorporate developing students' academic abilities to where they need to be to earn college credit more practically with better educational outcomes.

Corequisite Gateway Courses

One such effort, known as corequisite gateway courses, has institutions enrolling non-college-ready students in credit classes in their first semester and offering some additional instruction or academic support to compensate for the student's lack of academic ability (Vandal, 2016). Corequisite gateway classes were first implemented by the Community College of Baltimore County in 2007 (Adams et al., 2009). In a study conducted by the Community College Research Center, the corequisite gateway course model showed much higher course completion rates for students who participated in the program than those who did not (Adams et al., 2009). In addition, the model saves students time and money (Bio & Korey-Smith, 2018). Thus the model began gaining popularity, with colleges in other states implementing it, including California, Tennessee,

and Texas (Belfield et al., 2016; California Acceleration Project, 2018; Templer et al., 2019).

Corequisite Writing Course Models

As with any corequisite course model, one of the highlighting features of the model begins with non-college-ready students who would otherwise have been placed into developmental reading and writing classes being instead funneled into an institution's initial credit-bearing English course (Rigolino & Freel, 2007). It is also typical for the standards to remain identical to the standard credit version of the course, with little to no modifications being made to the expectations of the class (Alba, 2016; Rigolino & Freel, 2007; Templer et al., 2019). Finally, there are a variety of different types of models that have been deployed in higher education classrooms across the country (Adams et al., 2009).

In an article discussing the implementation of different types of corequisite developmental writing course models at various community colleges across the country, Adams discusses several course models that were deployed (Adams et al., 2009). The first mentioned is the fast track, or sketch model, where only developmental students are enrolled in a pair of English classes which meet for a total of 6 hours a week, one the credit-bearing and the other a helper course to support the students' efforts in the credit portion of the class (Adams, p. 27, 2020). This primary course model is the most closely aligned with the model that was the subject of this research study while incorporating the blended instruction style of the next model listed – the studio model (Adams, 2020; Templer et al., 2019).

The studio model blends developmental-level students with students who are considered college-ready; however, the developmental-level students are also required to attend an hourlong writing studio session each week with students from other classes

where they receive feedback on their writing assignments from each other (Adams, 2020, p. 28). The third is the tutoring model, where developmental students are mixed with their college-ready peers in a standard credit-bearing English class, and the developmental students are strongly encouraged and/or required to attend writing tutoring at the campus Writing Center (Adams, p. 28, 2020). The third model discussed here utilizes tutoring as an encouraged portion of the class experience, though does not specifically feature embedded tutoring, unlike other studies discussed later in this literature review, such as Schubert (2017) and Alba (2016).

Adams (2020) continues to highlight several issues that must be addressed to ensure the success of the course models, including making developmental students understand that they are “college material.” The implemented model must shorten the developmental course pipeline, and efforts must be made to remove the negative stigma of asking for additional support for students, among others. Adams’s (2020) concerns are shared and addressed by many of their peers, including Blaauw-Hara et al. (2020) and Pagnac et al. (2014)). Blaauw-Hara et al. (2020) share that students enrolled in CGECs that employed a writing about writing approach developed a strong sense of self-efficacy, which is akin to the receding of the negative stigma that Adams (2020) spoke about.

In a qualitative case study, Shanahan (2018) chronicled the deployment of a corequisite developmental writing program through the eyes of an instructor who taught at a midwestern technical college. She noted that the critical opportunities that the transition to the corequisite course model produced were reflecting on the purpose of developmental writing instruction, utilizing free time and small class size for higher levels of individualized instruction, employing more social approaches to instruction, and gaining a stronger understanding of student errors and motivation (Shanahan, 2018). This writing instructor was not alone in her views, as Edgecombe et al. (2014, p. 16) noted

similar observations from faculty interviews when a CGEC model was placed into practice: “(The) English department recognized the limitations of remedial pedagogy ... and reshaped both what is taught in developmental English and how it is taught”. Shanahan (2018) highlighted key challenges that arose due to the shift to the corequisite model; competing views on the value of academic discourse and grammar through instruction, identifying a cohesive set of standards by which to measure all students, finding the correct balance of structure and flexibility, and motivating students to take ownership of their learning were identified as these challenges. These challenges possibly arose due to the nature of corequisite remediation, which emphasizes developing necessary thinking skills for students placed into developmental courses, as they must handle the more thoughtfully rigorous coursework of college credit-bearing classes (Edgecombe et al., 2014; Hemn & Snell, 2014).

Shanahan (2018) indicated that these opportunities and tensions arose from the beliefs that writing faculty members held which morphed throughout the implementation of the corequisite model. These beliefs included the instructor thinking about the skills that students would require beyond their initial English composition credit, the shifting from the notion of a developmental writing class being a fragmented experience, the need to challenge students who placed into those courses to employ higher-order critical thinking skills, and, finally, the need for proper grammar for the sake of clarity in students’ writing. In a sister study, Fournier (2016) conducted a qualitative analysis that gauged faculty impressions of the teaching model and its initial implementation. She echoed the same rationale for implementation as in many other states and institutions, focusing on speeding up the development course pipeline, acquiring appropriate college credit sooner, and expediting the student’s achieving of a credential (Fournier, 2016). In her review of the data, Fournier (2016) shares that, while the faculty members felt the

courses were effective in achieving their goals, they also felt that more work was needed in aligning developmental course content with college-level expectations to help students of all academic abilities to achieve success. The success of the course model at the target institution for Fournier’s study was not an isolated incident, with other studies of CGECs confirming similar results (Moore-Bohannon, 2021; Vandal, 2014; Wilkstrom, 2018).

Effectiveness of the Corequisite Remediation Teaching Model

In addition to CGECs, the corequisite model has also been deployed successfully in gateway math courses as well (Childers et al., 2021; Royer & Baker, 2018; Vandal, 214). In 2016, Logue et al. published one of the first studies that directly compared the effectiveness of the historical developmental course model versus the newly implemented corequisite model in math classes in the City University of New York system, through a randomized controlled trial on a group of students with identified developmental math needs and their progression through three different math courses. One of Logue’s findings from the study was that the additional supports were probably the cause of the students’ higher pass rate in the credit-bearing course and that additional investment in those types of support might be a good investment for state and local governments rather than traditional developmental courses (Logue et al., 2016). Logue et al. (2019) followed this study with another that further proved that policies that make corequisite remediation mandatory result in a higher level of success of course completion than traditional remediation. So, if studies are indicating that the model is working in both English and math, how well is it working?

A qualitative study conducted by Blaauw-Hara et al. (2020) explored a corequisite course model, like the fast-track model discussed by Adams (2020), that employed a “writing about writing” approach (WAW). WAW means that students in a writing class use a “meta-cognitive” approach to writing wherein some of the assignments they

undertake in the course will have them writing about the writing process they are actively going through (Wardle et al., 2017). Some of the themes that Blaauw-Hara et al. (2020) drew from the students they spoke to for the study were that the students appreciated the corequisite class, they developed a sense of self-efficacy in reading and writing, and the students saw the transferability of the writing skills they were learning in the English class to other courses. These outcomes (Blaauw-Hara et al., 2020) dovetail with the requirements that Adams (2009, 2020) expressed, implying that there is promise in employing the corequisite model for developmental students in need of English courses.

English gateway courses have also been included in the corequisite model. In a study conducted by Hern (2012) at Chabot College in California, completion data from students who partake in the college's accelerated English pathway and traditional two-semester developmental sequence is discussed with the accelerated corequisite pathway yielding higher completion rates. Hern (2012) examined different cohorts of students who took different offered developmental English pathways in different semesters and concluded the reason for the lower attrition rate for students in a nonaccelerated pathway was that they had more semesters to drop out before completing the course sequence. Hern (2012) also noted that students who took the accelerated pathway performed slightly better in their continuing English coursework than those in the nonaccelerated path. Hern (2012) closed by discussing the success rate of the students who test within the lowest-performing 20% as measured by Chabot's college readiness placement exam, the Accuplacer, with 45% of those students passing the accelerated English pathway.

In a report like Hern's, Christie and Gaillet (2020) look at the CGEC model at Georgia State University, where the class that was corequisite to English was the University's orientation to college course (GSU 1010). Christie and Gaillet (2020) argue the success of this specific model was due to the orientation class being molded to

support the students' efforts in their gateway English class, much like how other institutions molded their developmental writing classes when deploying the corequisite model (Blaauw-Hara et al., 2020; Bosley et al., 2021). Christie and Gaillet's (2020) statements are echoed in a 2018 qualitative study by Carter. Carter (2018) interviewed several students, faculty, and advisors from a variety of Texas community colleges about the English remediation process through placement, enrollment, and course completion. Carter's (2018) findings highlighted that the faculty and advisors saw institutional forms of support as the most key items in making their corequisite models a success, with those resources being tutoring, advising, counseling, and faculty. Those sentiments were further confirmed through the responses, and following data analysis, that Carter (2018) received from the students who were interviewed as a part of the same study. So, as has been discussed in other studies, the success of these classes was not always achieved through solely specialized class instruction by faculty, but also with campus tutoring outlets that were utilized to support further the students participating in corequisite classes.

Writing Tutoring in Higher Education

With the widespread implementation of various academic support mechanisms in higher education classrooms, such as Supplemental Instruction (SI) and center-based tutorial sessions, embedded writing tutoring has several key features that distinguish it from other forms of in-class academic support (Bleakney et al., 2020; Carpenter et al., 2014). The unique features of the model include the ability of the tutor to act as an intermediary for students to the instructor, tutors being able to offer specific and informative feedback to students that are tailored to the class, and the ability for the faculty member to utilize the tutor during class time to guide small groups of students (Epstein & Draxler, 2020; Pagnac et al., 2014).

Embedded Writing Tutoring

In their book *On Location: Theory and Practice in Classroom-Based Writing Tutoring*, Grobman and Spigleman (2005) laid the groundwork for what would follow in embedded writing tutoring practice and policy by identifying the core features of the model as it is based around the curriculum of a specific class versus a traditional supplemental model. Hannum, Bracewell, and Head (2014) examine the initial planning and deployment of the embedded tutoring program for the Communication Center at the Georgia Institute of Technology. The center's staff consisted mainly of postdoctoral fellows who served in the embedded tutoring roles, thus garnering more faculty support than would have occurred with undergraduate-level peer tutors (Hannum et al., 2014, p. 95). The fundamental aims of their embedded tutoring program were suitably understanding the pedagogical goals of instructors to address student needs better and involving instructors in the planning of the program so that they would better understand its purpose (Hannum et al., 2014). This technique is not strictly relegated to English or Humanities based classes, as it has been deployed to support other types of courses as well, including physical science classes like Biology (Dansereau et al., 2020)

The Center's first opportunity to deploy an embedded tutor came in a philosophy class where the instructor reached out to the Center's director to request an intervention tailored to the specific communication needs of the students (Hannum et al., 2014). The director chose a professional tutor with an appropriate background to work with the class instructor to deliver a presentation to the students of the course (Hannum et al., 2014). After facilitating the presentation, the tutor then worked with small groups of students to address their concerns about their coursework. The tutor found it invaluable in supporting the students to improve the quality of their work. The class instructor found this intervention so helpful that they wanted a more permanent tutor presence in the course

(Hannum et al., 2014). This interaction points out the hallmarks that Grobman and Spigleman (2005) state are necessary for successful classroom-based tutoring, including communication between the tutor and faculty, the tutor's keen understanding of the course material and expectations, and class time dedicated to the tutor performing tailored academic support.

A similar embedded writing tutoring model is discussed in Pagnac et al. (2014) at Central College. Their embedded tutoring program began with writing tutors and librarians in their freshman-level college success course. The intent was to connect students with academic support resources from the very beginning of their studies. The librarians assigned to the classes spent time reviewing information literacy and research practices with the students in the course (Pagnac et al., 2014). As the model's popularity increased, the librarians were replaced by writing tutors provided by the on-campus writing center (Pagnac et al., 2014). The tutors and faculty of the classes practiced an integrated and collaborative approach to working with students through writing assignments (Pagnac et al., 2014). This would consist of the writing tutor and faculty meeting at various points throughout a semester to discuss students' progress in their writing and using feedback from one another to enhance further their approach to working with the student (Pagnac et al., 2014). This feedback would be woven into class activities such as research workshops, peer essay review sessions, and individual meetings with students during class time (Pagnac et al., 2014). The primary challenges of this model were being able to cover every class, due to scheduling issues, and offering specific tutor training that applies to writing-enhanced classes (Pagnac et al., 2014). This technique is also not just limited to entry-level courses, as a similar effort was deployed in online doctoral programs and yielded similar successful results (Marshall et al., 2019).

Yet, with these models of embedded tutoring, were any of these supporting better outcomes among students in the classes?

The Impact of Embedded Writing Tutoring

In a study that examines the factors that affect the level of success of course-embedded tutoring, Webster and Hansen (2014) detail the most successful embedded writing tutoring as being when the course instructor, embedded writing tutor, and students all take something significant away from the experience with each group gaining a deeper insight on their abilities as thinkers, writers, and educators. Yet, Webster and Hansen also posit that with embedded tutoring, “success is striking in its uneven and unpredictable nature,” (p. 51, 2014), offering the fact that there is a large amount of variance in outcomes.

Gentile (2014) argues that course-embedded tutoring programs offer tutors a chance to enhance teaching practices because of the inherent connection that can occur between students and tutors during class time, as “tutors have opportunities to move among multiple pedagogical spaces structuring a first-year writings student’s experience” (p. 34, 2014). This luxury is not something that would be afforded to writing tutors in a traditional individual tutoring session which is removed from the classroom setting. In a study that examined how this phenomenon played out, Schubert conducted a mixed-methods study that utilized Dweck’s (2006) mindset theory as a framework to explore how students’ “mindsets affect their writing processes and performance and to investigate an embedded tutor’s influence on students’ mindsets and their writing” (p. 75, 2017). The sample consisted of engineering students and was divided into three groups: the experimental group that was in the section of the course with the embedded tutor, the control group which was in the class that the same instructor taught as the experimental group without the embedded tutor, and the comparison group, which was students in the

same course taught by a different instructor (Schubert, 2017). The studied essays were graded blindly by Schubert (2017); the experimental group saw a moderate increase in their writing abilities, and the comparison and control groups only saw a slight increase in their essay scores. Schubert also interviewed the writing tutor who worked with the experimental group of students, who indicated that most students were happy to work with her (Schubert, 2017). In closing her study, Schubert (2017) concludes that having a growth mindset does lend itself to a student enhancing their writing abilities, while a fixed mindset leads to a writer's abilities remaining stagnant. Finally, she concludes that the embedded tutoring was successful, indicating the experimental group's higher literature review ratings demonstrated this fact (Schubert, 2017).

In a study that yielded confirmations similar to Schubert's (2017), Bleakney et al. (2020) conducted a study, via a survey, on the impressions faculties and writing tutors had about their embedded writing tutoring experiences at several different universities. The factors the researchers identified as being common among all the different types of embedded tutoring programs were that both groups of stakeholders felt that students were more engaged in the writing process and thus became better writers through the experience, the embedded tutors developed a greater self-awareness of their work and the work of their tutees, and faculty had a better understanding of the usefulness and needs of the individual writing centers. Cheatle and Sanchez (2021) discuss the outcomes of an embedded writing tutor support program that closely mirrors the previously detailed efforts; however, the writing tutors evaluated in their study were deployed to unique student groups instead of classes. They expressed similar successes in that their analysis showed that the students the tutors worked with felt they were stronger writers after the experience and were more confident in their research skills (Cheatle & Sanchez, 2021). They also noted that the tutors were able to reach more students than those who would

typically utilize the center's services and that this was encouraged through the tutors having office hours that were dedicated to serving student group members, custom-tailoring unique activities specifically for the student group, and the tutor having a long-term plan for the group that semester (Cheatle & Sanchez, p. 28, 2021). Something of note about the study, though, is that it indicated that while the tutors were assigned to a specific student group, it did not seem there was as significant a time dedication as would have been required of an embedded tutor who was required to attend weekly class sessions (Alba, 2016; Cheatle & Sanchez, 2021). So, if embedded writing tutoring works on its own, what impact would it have if implemented in CGECs?

One of the key features of CGEC models is the additional academic support that is provided to the developmental students who are placed into them (Adams et al., 2009; Rigolino & Freel, 2007). In 2016, Alba published a study that examined the deployment and success of a corequisite course model at a "small, private Christian liberal arts university in the Southwest United States" (p. 4, 2016). Historically, non-college-ready English students were placed into a one-semester developmental writing class before taking their first English credit course the following semester (Alba, 2016). This model was discontinued in fall 2012 and replaced in fall 2014 by a corequisite model that allowed these students to take a required writing workshop class that could be paired with one of five freshman-level writing-intensive classes, including their first English credit class, with an embedded tutor in these sections (Alba, 2016). Alba's (2016) school had also recently grown to include a more diverse campus of 2,500 students, including distinct ethnicities, cultures, and genders, and saw an increase in students identified as not college-ready. Alba (2016) used a mix of individual interviews and survey data collected from students who participated in the accelerated course model. Her first research question primarily examined students' perceptions of peer tutors within the classroom

(Alba, 2016). Her data and analysis indicated that students found the tutor's in-class presence very helpful and often less intimidating to work with than the faculty member instructing the class, particularly for English-as-second-language students (Alba, 2016). The students also shared that the tutor was a valuable resource because the tutors were peer tutors (fellow students). Thus, the students were assured that the tutor clearly understood the professor's expectations on unique assignments (Alba, 2016). Some of the interview participants liked the tutors so much that they wanted to see the tutor's course presence increase and be utilized more in the classroom (Alba, 2016). Also of note from the study were the success rates of the students who participated in the accelerated course model, in that there was an almost 10% increase in pass rates for students' credit courses when the embedded tutors were introduced to the model in fall 2014 (Alba, 2016). In her findings, Alba (2016) reports that all the data indicated that the students had a positive experience in sections where an embedded tutor was present, while quantitative data showed that the same students did just as well, if not better than their peers in other classes. Alba (2016) acknowledges that her sample size was relatively small, so further research could be conducted on a larger student population to investigate the effectiveness of embedded tutoring (2016). Rigolino and Freel (2007) discuss that some colleges facilitate students having the same instructor for the developmental workshop and composition class as part of the accelerated class pipeline. This has yielded positive results where it is implemented. This was not the case at the university that was the subject of Alba's study, but it is the case for some of the classes offered by the school that is the focus of this study.

Theoretical Framework

This study employed the use of Grobman and Spigleman's 2005 and Thomas's 2006 models of embedded tutoring as the basis of the research that was conducted. When building on his original model on student retention in 2012, Tinto advocated for offering instructional support in the classroom due to the work and personal responsibilities students had outside of the classroom that limits the amount of time a learner can spend on campus. With that model being at the core of the development of corequisite gateway English courses, Grobman and Spigleman (2005) compliment Tinto's call for in-class academic support with the foundation they laid for embedded writing tutoring practice and policy. They first identify the core difference between embedded tutoring and traditional tutoring: "In contrast to the more familiar curriculum-based peer tutoring model, classroom-based writing tutoring describes tutoring arrangements integral to writing instruction-writing support offered directly to students during class" (Grobman & Spigleman, 2005).

They follow this by emphasizing that there is an apparent distinction between in-class tutoring and formal instruction, in that classroom-based writing tutoring is an amalgamated instructional method (Grobman & Spigleman, 2005). This is derived from the pedagogy for classroom-based writing theory from genre theory, specifically hybridity (Dean, 2008; Grobman & Spigleman, 2005). Genre theory was chosen thanks to its core purpose of dissolving boundaries, much like classroom-based writing tutoring blurred the lines between traditional peer tutoring and formal classroom instruction (Grobman & Spigleman, 2005). The two continued to establish some of the core tenets of classroom-based writing tutoring as having heavy involvement from the faculty by planning much of the course curriculum around the presence of the tutor and there being

a high level of trust and communication between the tutor and instructor (Grobman & Spigleman, 2005).

Thomas's 2006 model of tutoring as an effective means of academic support comes into play when using embedded writing tutoring as a means of enhancing student persistence and retention. Thomas's (2006) model requires a high level of academic and social integration to steer a student toward academic success through earning college credit with additional academic support built in that meets the student where they are at (Pascarella & Terenzini, 2005). Thomas (2006) dives further into one of the specifics of Tinto's (1998) model by stating that personal tutoring plays a crucial role in a student's learning process and, when executed correctly, allows for students to make meaningful connections between material that is covered in their courses. Thomas's (2006) theory on the impact of personal tutoring relates heavily to the specialized model of embedded tutoring that was previously discussed. As one of the most common issues of student engagement in higher education is that students are unable to spend a significant amount of time on campus, an integrated model of tutoring would be necessary to have the students access the resources (Thomas, 2006; Tinto, 2012). Of the different tutoring models discussed by Thomas (2006), the college that is being studied adopted embedded tutoring, a hybrid of the professional and integrated models.

Summary of Findings

The literature covered in this chapter examined the different aspects of the higher education experience that contribute to the unique CGEC that is being studied, including college readiness measurement, course placement, and the embedded tutoring model that supported it. Primarily, it discussed the concept of college readiness and how readiness testing is used to place students into developmental or credit-bearing college courses. While the term college readiness has been clearly defined as the skills and knowledge a

student needs to be successful in college credit courses (Malin et al., 2017; Mishkind, 2014; Venezia et al., 2012), there is an ongoing debate as to what the best means of measuring it is (Guha et al., 2018). College readiness testing is the most employed method and has been shown to reliably place students into courses that are appropriate for their current academic skill levels (Cui & Bay, 2016). However, placement into developmental classes would often lead to negative academic outcomes for at-risk student populations (Reid & Moore, 2008; Royster et al., 2015).

Next, it covered the length and faults of traditional developmental course pathways (Bailey et al., 2010; Fields et al., 2012; Horn et al., 2014). Sometimes taking as long as three semesters for non-college-ready students to complete, the historical model of offering sequential developmental classes presented students with many “off-ramps” before they could see a chance at earning their first college credits, which Tinto (1975) highlights as their first step to success in higher education. If a student is not deemed ready to handle the rigors of college-level coursework, there still need to be some supportive means put into place to move students closer to earning their first credits (Boylan, 2002). Many colleges and universities are taking significant steps to trim down this long pathway with accelerated progression for developmental students.

Next, this chapter examined the effectiveness and variety of updated course models that allow non-college-ready students to immediately enroll in credit-bearing classes with some additional academic support attached (Adams et al., 2009; Belfield et al., 2016; Fain, 2014; Fournier, 2016; Shanahan, 2018). These included Fournier (2016) discussing the faculty's challenges when implementing the model, such as being worried that there would not be enough time to cover all the necessary material but that many were pleased with the learning outcomes. Yet, students who would have been historically

remediated over semesters cannot be expected to complete college-level coursework in a shorter period without the addition of specialized academic support.

Finally, the chapter reviewed the potency of course-embedded writing tutoring when adequately implemented (Alba, 2016; Pagnac et al., 2014; Schubert, 2017). Embedded tutoring has already been proven to increase students' writing abilities, so it seems natural to be paired with the corequisite course model. However, the studies were largely qualitative, so a study that contained a significant quantitative analysis of such a program would prove helpful. These qualitative studies highlighted the need for a high level of communication and trust between the faculty member teaching a course and the tutor assigned to it, and for a space to be “cleared” in the classroom for unique exercises that utilize the strengths a tutor brings to the course curriculum.

Conclusion

In conclusion, a growing body of literature examines the intricacies of college readiness and course placement, corequisite gateway course models, and embedded tutoring separately; however, few analyze these concepts jointly. Further, a significant portion of the literature that discusses embedded writing tutoring is primarily qualitative. While these studies indicate that college readiness is an accurate means of course placement and that embedded writing tutoring is a potent and effective means of academic support, a study that incorporated a significant amount of quantitative data paired with detailed qualitative data could fill this gap in the literature, which was the purpose of this study.

CHAPTER III: METHODOLOGY

The purpose of this sequential mixed-methods study was to examine the influence of embedded tutoring and college readiness status on student academic achievement in corequisite gateway English courses at a community college. Archival academic achievement data on a purposeful sample of students in ENGL 1301 courses, some of which were CGECs, at a community college were analyzed using Mann-Whitney U tests, chi-squared tests of independence, and a multinomial logistic regression. Qualitative data gathered from interviews with the course instructors and class participants were analyzed through coding and categorizing the data to generate emergent themes. This chapter presents the research problem, operational theoretical constructs, research purpose and questions, research design, population and sampling, instrumentation, data collection procedures, data analysis methods, qualitative validity, privacy, ethical considerations, and study limitations.

Overview of the Research Problem

Colleges and universities are implementing corequisite gateway courses to expedite students' time in developmental classes if they fall below college readiness metrics as diagnosed by college readiness exams. Institutions need access to a detailed analysis of whether traditional means of college readiness testing have any significant impact on students' placement into these classes. Also, while these corequisite course models do shorten the period before a student can earn their first college credits, learners are expected to cover an increased amount of content over a shorter period. To mitigate that, schools have implemented specialized forms of academic support for the students in these sections (Office of the Vice-Chancellor for Academic Affairs, Tennessee Board of Regent's Office, 2016; Templer et al., 2017). Embedded tutoring is one of several

different practices that has been used to support students in these courses and has the potential to be used to increase a student's ability to achieve success in one of these classes significantly, as tutoring has made a significant difference in many other means of deployment (Thomas, 2006). Higher education tutoring centers must have access to a detailed analysis of previously employed tutoring practices and outcomes to make the most efficient use of their limited resources.

Operationalization of Theoretical Constructs

This study consisted of the following constructs: (a) tutor class presence, (b) college readiness, (c) academic outcome, and (d) course outcome. Tutor class presence was defined as whether an embedded tutor was present in an ENGL 1301 section. The tutors were hired, trained, and deployed by the on-campus Writing Center of the community college, to CGECs to support the academic success of students enrolled in those courses. College readiness was defined as an ability metric for reading and writing that assesses a student as likely to be successful in a college-level credit English course. It was assessed via an academic ability test before starting their college coursework or completing a gateway English college credit course (Lichman, 2013). Students who enrolled in the corequisite portion of a CGEC, IRW 0320, were determined as not college ready.

Academic outcomes were defined as the letter grade a student earns in their ENGL 1301 course. A successful course outcome was a student earning a letter grade of "C" or better in their ENGL 1301 course. An unsuccessful academic outcome will be defined as the student earning a letter grade of "D" or lower from their ENGL 1301 course. Finally, course outcomes were defined as whether a student passes or fails/withdraws from an ENGL 1301 section. A successful course outcome was the student earning a letter grade of "C" or better in their ENGL 1301 course. An

unsuccessful course outcome will be defined as the student earning a D, F letter grade or withdrawing from their ENGL 1301 course.

Research Purpose and Questions

The purpose of this sequential mixed-methods study was to examine the influence of embedded tutoring and college readiness on student academic achievement in corequisite gateway English courses at a community college. These research questions guided the study:

1. Is there a statistically significant mean difference in academic outcome for ENGL 1301 students based on college readiness?
2. Is there a statistically significant mean difference in academic outcome for ENGL 1301 students based on tutor class presence?
3. Is there a relationship between college readiness and ENGL 1301 student academic outcomes?
4. Is there a relationship between tutor class presence and ENGL 1301 student academic outcomes?
5. To what extent are tutor class presence and college readiness predictive of students' academic outcomes in ENGL 1301?
6. How do the ENGL 1301 instructors perceive having an embedded tutor in the course?
7. How do the ENGL 1301 students perceive having an embedded tutor in the course?

Research Design

This sequential mixed-methods study examined the influence of embedded tutoring and college readiness on student academic achievement in corequisite gateway English courses at a community college. The researcher employed a sequential mixed-methods design to verify if there was a connection between college readiness and embedded tutor presence as far as students achieving successful outcomes in CGECS via the quantitative research, and then offer a narrative explanation of those results via the qualitative component. The qualitative piece could offer a deeper understanding of the embedded tutoring program's impact as the researcher could examine interview responses for emergent themes that might not be captured with the quantitative piece (Creswell, 2012).

Archival academic achievement data, their college readiness status, and if a tutor was present in their course section was collected on a purposeful sample of students who took ENGL 1301 Composition 1 at the target institution. The following types of quantitative analysis were used to respond to the quantitative research questions: Mann-Whitney U, chi-squared tests of independence, and a binominal logistic regression. The second portion of the study involved collecting qualitative data from interviews with purposefully sampled course instructors and students focusing on their perception of ENGL 1301 tutor class presence which were analyzed through the coding and categorizing of similar statements, and the generation of emergent themes.

Population and Sample

The population was a southern community college located on the outskirts of a major Texas city. The purposefully selected population sample for the quantitative portion of the study was based primarily on the students' participation in ENGL 1301, with their college readiness and embedded tutor presence statuses as categorizing

qualifiers. According to the institution’s reported data for the spring 2021 semester, the institution is home to 3,996 students. As shown in Table 3.1, the student body is 40.8% Caucasian, 15.6% African American, 34.8% Hispanic, and the remaining 8.8% are from other races. There is a significantly higher percentage of female students, 62.3%, versus males, 37.3%. A purposeful sample of this student group was identified based on their participation in the college’s ENGL 1301 and/or IRW 0320 class. The ENGL 1301 course is required by most of the campus degree programs, so it was assumed this would be a representative sampling of the student demographics detailed in Table 3.1.

Table 3.1

Student Population Demographic Information

Demographic Characteristic		Frequency	Percent
1. Age Ranges	Under 18	989	24.7%
	18-24	1,855	46.4%
	25-29	409	10.2%
	30-39	483	12.0%
	40-49	195	4.9%
	50+	65	1.6%
2. Race	African American	623	15.6%
	Hispanic	1,389	34.8%
	Other	350	8.8%
	Caucasian	1,632	40.8%
3. Gender	Female	2,504	62.3%
	Male	1,492	37.3%

Interview Participant Selection

Purposeful sampling was used to identify instructors who taught CGECs as possible interview candidates for the sake of this study. Eligible faculty participants were identified as English faculty members, full-time or adjunct, who taught CGECs at the target institution with and without embedded tutors in their classes. Student interview participants were purposefully sampled, based on their college readiness and tutor class presence statuses, as possible interview participants. This sampling technique was appropriate for both populations as their unique roles gave insight into their experiences with the course (Creswell, 2012).

Instrumentation

The Texas Success Initiative Assessment (TSIA) was used as the primary instrument for assessing a student's college readiness level for this study. The TSIA was a college aptitude exam developed by the College Board that measured college readiness in reading, writing, and math deployed in Texas as a part of the Texas Success Initiative program (College Board, 2017). The assessment used multiple-choice questions to gauge a student's reading, math, and writing competency, the latter including a short essay. The exam was generally given on a computer, but students could request a paper-delivered test version. Incoming college students in the state of Texas were required to complete some or all portions of the exam if they did not meet the following criteria:

- Attaining a composite score of 23 or higher with at least a 19 on the English and math portion of the ACT;

- A minimum score of 530 in the math section and 480 in the Evidence-Based Reading and Writing section of the SAT;
- A score of at least 4000 on the English III and/or Algebra II STAAR End-of-Course exams;
- Completion of a college preparatory course in high school;
- A military veteran or an active-duty service member for at least three years preceding enrollment;
- Completion of college-level coursework that is deemed equivalent to a gateway English and/or math course (THECB, 2018).

The different sections of the test were scored on a scale of 310-390, with the THECB dictating that a score of 350 or higher on math, 351 or higher for reading, and a score of 340 for writing qualified a student as college-ready in any of those areas (The College Board, 2014). For the essay portion of the writing section, the essay was scored on a scale from 1 to 7, with a four being necessary to be declared college-ready in writing (THECB, 2017). If a student incorrectly answers too many college readiness questions, the TSIA would ask questions scaled to the Adult Basic Education (ABE) level. Thus, it is possible for the test-taker to receive an ABE score of 1-6, in addition to their college readiness score, which falls in the 310-390 range (The College Board, 2014).

The College Board requested Cui and Bay to conduct updated validity testing on the TSIA in 2016, with the pair of researchers releasing an updated report later in 2017 (2017). The researchers aimed to “determine the relationship between TSIA test scores and success in ... introductory credit-bearing college courses” (Cui & Bay, 2017). They

employed a logistic regression model that derived the probability of students succeeding in gateway courses such as math and composition. The population sample was taken from over 20,000 students across a large variety of sized two-year college campuses and several universities across Texas and a smaller portion of Universities (Cui & Bay, 2017). Successful course outcomes were defined as the student earning a grade of C- or higher, with unsuccessful outcomes being defined as a lower letter grade or withdrawal (much like this study). After conducting over 40 different logistic regression models, Cui and Bay (2017) concluded that the TSIA was a valid predictor of success in the classes included in the study, including composition.

Some of the notable statistics that were generated from the validity testing were that students who scored a 351 (range of 310-390), the college readiness cutoff score determined by the THECB, or better on the reading portion of the exam stood a 68% chance of passing a credit gateway English course upon their first attempt (Cui & Bay, 2017). The writing portion of the exam yielded similar results where if a test-taker earned a score of five (range of 1-8) or better on the writing prompt and 350 or better on the writing multiple-choice questions, the student stood a 75% chance of being able to pass a credit gateway English course on their initial attempt (Cui & Bay, 2017). Finally, if a student was able to score a 350, the math college readiness score designated by the THECB, or better on the math portion of the assessment, then they would stand a 64% chance of passing a gateway credit math class their first time taking it (Cui & Bay, 2017). In all three competencies, a student's chance of earning a better grade than a C- in the respective credit class increased along with their placement scores (Cui & Bay, 2017).

Data Collection Procedures

Quantitative

Before collecting any data, the researcher obtained the necessary approval from the Committee for the Protection for Human Subjects (CPHS) at the researcher's institution and the community college that the study focused on. Once approval was received from both, the researcher filed an archival data request with the Office of Institutional Research at the community college for a list of students who participated in CGEC sections from fall 2017 through spring 2019 (excluding summers), with indicators on which sections had tutors present, gender, age group of the students, what semester the class was taken, students' college readiness status for English, and their academic and course outcomes. The data were delivered on an Excel spreadsheet that was saved on the researcher's computer. There, the data were then parsed and organized in preparation for the analysis in IBM SPSS.

Qualitative

The qualitative data were gathered from interviews conducted by the researcher with six purposefully sampled ENGL 1301 course instructors, who elected to be research participants, about their use of embedded course tutors during the semesters the study covers. The researcher sent out a solicitation email to the English faculty at the community college to gauge the eligibility and willingness of prospective participants. Once an eligible and willing participant was identified, a mutually amicable time was agreed upon for the interview. Interviews took roughly 45 minutes and were conducted by audio chat through Microsoft Teams while audio was recorded on a cellphone. Upon

starting the Microsoft Teams meeting, the researcher presented the participant with a participation agreement (see Appendix A) as a digital document outlining their research participant's rights. By continuing with the interview, the participant gave their informed consent. The researcher then conducted the instructor interview (see Appendix B). After their completion, the interviews were transcribed into Microsoft Word for qualitative analysis.

The researcher solicited interest in the student interviews by emailing eligible participants. The researcher divided students into four different groups: college-ready students who participated in ENGL 1301 sections with a tutor present, college-ready students who participated in ENGL 1301 sections without a tutor present, non-college-ready students who participated in CGEC sections with a tutor present, and non-college ready students who participated in CGEC sections without a tutor present. The researcher identified three students that fell within each category. Once an eligible and willing participant was identified, a mutually agreed upon date and time was set for the interview. The interviews were conducted via audio chat through Microsoft Teams and audio recorded on a cellphone. Upon starting the interview, the researcher presented the participants with a digital informed consent agreement (see Appendix C) that outlined their rights as a research participant and offered their informed consent through continuing with the focus group. By moving forward with the interview, the participant indicated their consent to participate in the study. Upon confirming consent, the researcher proceeded with the interview (see Appendix D). After completing the

interview, the audio recordings were used to create transcriptions of the conversations in Word.

Data Analysis

Quantitative

The quantitative data were codified and uploaded into IBM SPSS for analysis. To answer RQ 1 and 2, Mann-Whitney U tests were conducted to examine the influences of tutor class presence and college readiness on student course outcomes in ENGL 1301. The independent variables, tutor class presence and college readiness, were coded as dichotomous categories: 0 = no and 1 = yes. The dependent variable, student academic outcome (letter grade), was coded as a categorical variable (e.g., F is 1, D is 2, etc.). The effect size was assessed using eta-squared ($\eta^2 = Z^2/(N-1)$).

RQ 3 and 4 were answered using Chi-square tests of Independence to investigate the relationship between tutor class presence and college readiness to student academic outcomes with all variables being coded the same as RQ1 and 2. Finally, a multinomial logistic regression was used to answer RQ 5 to see if tutor class presence and students' college readiness levels were predictive of students' academic outcomes. The effect size was assessed using pseudo- r^2 . A level of significance of .05 was used for all quantitative analyses in this study.

Qualitative

The researcher began the qualitative data analysis by listening to the audio recordings of the interactions with study participants, reviewing field notes, and having the interviews transcribed by a private company. Following the initial review, the researcher input the data into NVivo for coding and categorizing. As it was detailed by Glaser and Strauss (1967), the researcher employed grounded theory to derive meaning from the data through constant-comparison inductive coding. Following Glaser and Strauss's (1967) interpretation, the use of grounded theory and constant-comparison inductive coding was appropriate in these circumstances. It encouraged the researcher to examine a specific situation or set of circumstances and then search for meaning by comparing data from one interview with another (Lichtman, 2013). The researcher initially reviewed the transcriptions of all the various interviews and looked for statements that were relevant to the study and entered these statements into NVivo to generate codes. The researcher determined the relevancy of the statements as those statements that were related to RQ6 and RQ7.

After going through each set of interviews twice to ensure that all coded and related statements were entered into NVivo, the researcher analyzed the data by looking at the frequency of specific codes and their relationships to create categories. The codes and associated statements were organized within NVivo into categories, where the researcher looked for patterns within the categories to generate emergent themes, which were reported in Chapter IV and analyzed in Chapter V of this study. Data gathered and analyzed from the instructor interviews were used to respond to RQ6, and data collected from the student interviews were used to respond to RQ7. The instructors and students also offered overlapping information that was used to respond to both questions simultaneously in Chapter V of this study.

Qualitative Validity

For the qualitative portion of the study, the researcher took several courses of action to improve the credibility of the data analysis results: expert review, member checking, and triangulation of the data. Initially, the researcher crafted the interview questions, had them reviewed by a qualitative methodologist, and updated them appropriately. Early qualitative data analysis was shared with research participants to ensure that their statements were accurately represented (member checking.) Finally, triangulation of the qualitative data was used to bolster the results of the study. This study was also conducted under the guidance of a dissertation committee that conducted regular reviews of the research as it was being undertaken.

Privacy and Ethical Considerations

Before any research was conducted, the research study proposal was submitted to the Committee for the Protection of Human Subjects for approval to ensure that all institutional, state, and federal guidelines were followed. Research participants were presented with informed consent agreements before collecting any data to ensure they were well-informed about the study. Some personal information from the participants might have been shared during the individual interviews with the researcher. Still, all participants' responses were completely confidential, with all personal identifiers being switched to pseudonyms to preserve the anonymity of the research participants. All information was stored on a password-protected desktop computer and will be destroyed after five years.

Research Design Limitations

There were limitations to this study. First, the archival academic achievement data that were used for quantitative analysis could have credibility issues due to unintentional incorrect entries due to human error, which could alter the results of that portion of the

research. Second, the researcher assumed that the interviewees for the qualitative portion of the study were honest in their responses. This honesty could be affected by such things as politeness or political correctness which could skew the findings of the study. In addition, there were slight variations in how instructors used embedded tutors in their classes, so students may have had different experiences. Finally, this study was conducted at a single community college with a unique student population and a limited number of interviewees. Universities typically have higher percentages of students that are considered college ready, and thus a similar study at one of those schools might yield different results. Given the broadness of the topics discussed in this study, it would be advisable to consider similar studies before drawing any conclusions.

Conclusion

This explanatory sequential mixed-methods study investigated the academic effectiveness of CGECs that incorporated embedded tutoring via quantitative analysis of archival academic achievement data on student academic outcomes in different versions of the class and qualitative analysis of individual interviews with course instructors and students. This research study chapter has explained the research problem, purpose, and methodology. The quantitative and qualitative research design, population and sampling selection, data collection and analysis methods, assumptions, and limitations were also detailed. Both types of inquiry allowed the researcher to gauge the effectiveness of the teaching model and identify different teaching and tutoring methods used to achieve these results. Chapter IV will discuss the quantitative and qualitative analysis conducted to respond to the proposed research questions.

CHAPTER IV:

RESULTS

The purpose of this study was to examine the impact of embedded tutors and college readiness on the academic outcomes of students in ENGL 1301 classes. This chapter analyzes the quantitative and qualitative data gathered for this study and responds to the seven posed research questions below. It concludes with a summary of findings.

Participant Demographics

For the quantitative portion of this study, there were 2,920 participants whose demographic data are detailed in Table 4.1. Of the participant population, 86.0% were age 24 or younger, with only 14.0% being 25 or older. The ethnic breakdown of the quantitative sample was 14.7% African American, 32.5% Hispanic, 6.0% other, and 46.8% Caucasian. Finally, most were female, 58.0%, versus male, 42.0%. Most of the eligible student participants are white females who are 24 or under.

Table 4.1

Student Demographic Information

Demographic Characteristic		Frequency (n)	Percentage (%)
1. Age Group	24 and Under	2,511	86.0
	25 and Older	409	14.0
2. Race/Ethnicity	African American	430	14.7
	Hispanic	950	32.5
	Other	175	6.0
	Caucasian	1,365	46.8
3. Gender	Female	1,694	58.0
	Male	1,226	42.0

Table 4.2 displays the students' college readiness, tutor presence, and course/academic outcomes for their first attempt at the course. Most of the students were considered college-ready (87.0%), versus the 13.0% who were not. As could be inferred from those percentages, 81.3% of the students did not have a tutor present in their class, with only 18.7% having an embedded tutor in their CGEC sections. Table 4.2 includes college readiness, course outcome, and tutor presence data from each research participant's first-class attempt. As is indicated in the table, most of the students were college-ready in English, took ENGL 1301 without a tutor present, and had successful course outcomes, with more than three quarters (78.8%) earning a grade of C or better in ENGL 1301 the first time they took the class.

Table 4.2

Student College Readiness and Course Outcome Information (First Attempt)

Demographic Characteristic		Frequency (n)	Percentage (%)
1. College Ready	No	379	13.0
	Yes	2,541	87.0
2. Tutor Present	No	2,375	81.3
	Yes	545	18.7
3. Grade	A	1,155	39.6
	B	793	27.6
	C	341	11.7
	D	108	3.7
	F	286	9.8
	W	237	8.1

A total of six eligible faculty participants were identified for the qualitative portion of the study. Table 4.3 provides information about the six faculty members that agreed to participate in the interviews for this study. Most of the faculty members were teaching full-time course loads for the community college, with only one being an adjunct (17.0%). Though all of them had been teaching for at least several years, the full-time faculty (83.0%) had all been teaching longer. More than six instructors taught CGECs at the institution that was the target of this study so student interview participants may have had class experiences different from those discussed by the instructors.

Table 4.3

Faculty Interview Participant Demographics

Demographic Characteristic		Frequency (n)	Percentage (%)
1. Age Group	39 and Younger	2	33.0
	40 and Older	4	67.0
2. Gender	Female	4	67.0
	Male	2	33.0
3. Race/Ethnicity	Caucasian	5	83.0
	Hispanic	1	17.0
4. Teaching Experience	10 Years or Less	2	33.0
	11 Years or More	4	67.0
5. Faculty Status	Full Time	5	83.0
	Adjunct	1	17.0

Four groups of three students (n = 12) were gathered that fell into each of the following categories: college-ready students that participated in ENGL 1301 sections with a tutor present, college-ready students that participated in ENGL 1301 sections without a tutor present, non-college-ready students that participated in CGEC sections with a tutor present, and non-college ready students that participated in CGEC sections without a tutor present. Table 4.4 offers demographic information for the student interview participants for the qualitative portion of the study.

Table 4.4

Student Interview Participant Demographics

Demographic Characteristic		Frequency (n)	Percentage (%)
1. Age Group	24 and Under	9	75.0
	25 and Older	3	25.0
2. Race/Ethnicity	Hispanic	7	58.3
	Caucasian	5	41.6
3. Gender	Female	11	91.6
	Male	1	8.3
4. College Ready	No	6	50.0
	Yes	6	50.0
5. Tutor Present	No	6	50.0
	Yes	6	50.0
6. Grade	A	4	33.3
	B	7	58.3
	W	1	8.3

Research Question 1

Research question one, *Is there a statistically significant mean difference in academic outcome for ENGL 1301 students based on college readiness?*, was answered by conducting a Mann-Whitney U test. The test was used to determine if there was any difference in academic outcome based on students' college readiness in ENGL 1301. The Mann-Whitney U test showed that there was a statistically significant mean difference in academic outcome for college-ready students compared to those students not deemed college ready, $Z = -5.034$, $p < .001$, with $\eta^2 = .01$. College readiness was accountable for 1.0% of the variance in ENGL 1301 academic outcomes for students.

Research Question 2

Research question two, *Is there a statistically significant mean difference in academic outcome for ENGL 1301 students based on tutor class presence?*, was answered by conducting a Mann-Whitney U test. The test was used to determine if there was any difference in academic outcome based on embedded tutor presence in ENGL 1301. The Mann-Whitney U test showed that there was not a statistically significant mean difference in academic outcome for students without an embedded tutor present compared to those students with an embedded tutor present, $Z = -1.239$, $p = .215$. It appears that tutor class presence did not lead to a significant difference in academic outcomes for students in ENGL 1301.

Research Question 3

Research question three, *Is there a relationship between college readiness and ENGL 1301 student academic outcomes?*, was answered with a Chi-Square Test of Independence. The test was used to determine if there was a relationship between student college readiness to the academic outcomes that students were achieving in ENGL 1301. Academic outcome was measured as the letter grade that the student earned in the class, A, B, C, D, or F. College readiness was measured as “yes or no”, as this variable was the status that classified the students. The Chi-Square Test of Independence suggested a statistically significant relationship between students’ college readiness status and students’ course outcomes, $X^2(4, N = 2,828) = 38.503, p < .001$. Table 4.5 shows that 85.4% of the college-ready students earned a passing academic outcome (A, B, or C) in ENGL 1301 versus only 72.9% of the non-college-ready students.

Table 4.5

Cross Tabulation Results of Students’ English College Readiness Status and Academic Outcomes

		Academic Outcome				
		A	B	C	D	F
College Ready	No	33.6%	26.4%	12.9%	7.4%	19.6%
	Yes	43.0%	29.5%	12.9%	3.9%	10.7%

Research Question 4

Research Question four, *Is there a relationship between tutor class presence and ENGL 1301 student academic outcomes?*, was addressed with a Chi-Square Test of Independence. The test was used to determine if there was a relationship between tutor class presence to the academic outcomes that students were achieving in ENGL 1301. Academic outcome was measured as the letter grade that the student earned in the class, A, B, C, D, or F. Tutor class presence was measured as yes or no, as this variable was the status that classified the students. The Chi-Square Test of Independence results suggested a statistically significant relationship between tutor class presence and students' course outcomes, $X^2(4, N = 2,828) = 16.074, p = .003$. Table 4.6 shows that 84.4% of the students without an embedded tutor present earned a passing academic outcome (A, B, or C) in ENGL 1301 versus 81.3% of those students who did have an embedded tutor present.

Table 4.6

Cross Tabulation Results of Tutor Class Presence and Academic Outcomes

		Academic Outcome				
		A	B	C	D	F
Tutor Class Presence	No	40.6%	30.4%	13.4%	4.2%	11.4%
	Yes	47.0%	23.4%	10.9%	4.7%	14.0%

Research Question 5

Research question five, *To what extent are tutor class presence and college readiness predictive of students' academic outcomes in ENGL 1301?*, was answered using multinomial logistic regression. Findings indicated tutor class presence and college readiness were predictive of academic outcomes in ENGL 1301, $X^2(8, N = 2,828) = 64.262, p < .001, \text{pseudo-}r^2 = .024$. The variance that can be explained in academic outcomes attributed to tutor class presence and college readiness was 2.4%. Both tutor class presence and college readiness were found to be significant predictors ($p < .001$) of ENGL 1301 course grades. In other words, students were more likely to successfully pass ENGL 1301 when they were college ready or had an embedded tutor.

Research Question 6

Research question six, *How do instructors who taught ENGL 1301 perceive having an embedded tutor in the course?*, was addressed by conducting a qualitative analysis of the data gathered from six ENGL 1301 course instructors at the target institution where the research was conducted. The researcher used grounded theory to derive meaning from the data through constant-comparison inductive coding, following the model outlined by Glaser (1967). Following Glaser's interpretation, the use of grounded theory and constant-comparison inductive coding was appropriate in these circumstances. This encouraged the researcher to examine statements that were relevant to the research question and compare data from one interview to another (Lichtman, 2013). While analyzing the interview data, the researcher generated codes by reading and re-reading the interview data and selecting statements from the interviewees that were relevant to the research question. Following that, the coded statements were sorted into nine categories that grouped statements that were related in context to one another. Finally, the researcher generated three overarching emergent themes from the categories:

(a) evolving faculty perceptions of and practices in CGECs, (b) student challenges in CGECs, and (c) incorporating embedded writing tutors into CGECs. Table 4.7 presents a breakdown of the categories used to formulate the emergent themes for RQ4 and the frequencies of relevant statements made by the course instructors during their interviews.

Table 4.7

Categories, Themes, and Frequencies of Instructor Interviews

Themes & Categories	Frequency
Evolving Faculty Perceptions of and Practices in CGECS	
What ENGL 1301 Should Be	4
Shortening the Developmental Pipeline	4
Challenges in CGECs	
Student Trepidation about Taking the Pre-Requisite	3
Reasons Students are Lost in CGECs	4
Different Co-requisite Instructors	3
Incorporating Embedded Writing Tutors into CGECs	
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Evolving Faculty Perceptions of and Practices in CGECs

Since the purpose of corequisite gateway classes is to help developmental students earn their credits faster, the instructors interviewed were asked about their thoughts on what the purpose of gateway English classes were and the common challenges that students faced in completing them to establish the baseline for the expectations and hurdles the developmental students would need to overcome. Those questions led to the emergent theme of evolving faculty perceptions of and practices in CGECs was created from two categories: (a) what ENGL 1301 should be and (b) student challenges in CGECs. The primary category of what ENGL 1301 should be was generated from statements where the instructors focused on the purpose of the gateway class and why it is referred to as such. The second category, student challenges in CGECs, is based on statements that instructors made regarding the issues that cause students, college-ready or not, to not be successful in ENGL 1301.

What ENGL 1301 Should Be. Four of the six faculty members described what a gateway English course should do for the students in their classrooms. The instructors shared the common belief that gateway English classes, called ENGL 1301 at the target research school, should lay the foundational principles and expectations of academic writing for their students. However, Instructors 3 and 1 framed their comments on how other faculty members needed to view the purpose of the class. Instructor 3 said:

The gateway course is called such because it is a course that students have difficulty with often, and it must be passed to take a lot of other coursework. It is a prerequisite for a lot of different classes. I think it's an important course to prepare students for entering academic discourse, writing in various situations, and not just for future coursework, but writing in general. It's not a course that teaches students how to write, and then they're done with it. I think sometimes

that's the perception of it from the outside is that "oh, they've taken Comp 1, why aren't they better writers?". The answer is, well, they're still learning to write. Like instructor 3, Instructor 1 shared the view that ENGL 1301 that students who complete the class are still developing their academic writing:

Especially like 1301, where people are scared, they're writing papers, haven't done this, or weren't successful before, or, or. I used to hear a lot of "Well, they should know that already." And I think that's a bad philosophy to have, especially in the community college setting. For me, it's always no, you meet them where they are, and you work. And yeah, that may take a little bit more work on your part, but at the end of the day, that's why you're a teacher.

As with Instructors 3 and 1, Instructors 4 and 5 described the same focal point of ENGL 1301. However, they framed their statements around the class to students, not other faculty members. Instructor 4 discussed how the course could level the playing field for the students whose writing was not as strong:

I think gateway courses like English 1301... are necessary, equalizing sites for students. I realize "equalizing" is an overly idealistic term, but for some of the students, this is what it can be, and for those for whom the course does not "equalize" it certainly helps them learn and/or practice foundational knowledge that begins to properly demystify "college" and the interactions within.

While Instructor 4 focuses more on the need for students to become comfortable in a college environment as one of the necessary outcomes of ENGL 1301, Instructor 5 concentrated on the key elements of text formatting and the necessities of professional communication:

In general, it's great that we have it at the beginning of a student's college career. I believe that it is an excellent lead into their work... I've found in teaching that I'm

interested in, with students, is that a lot of them don't even know how to write like an email. They think it's okay to do it in text formatting. So, I even use the English course for that kind of stuff, like how to communicate on a more professional level. So, I think that it's interesting that students didn't even have that kind of ability.

Even though the instructors each spoke about slightly different pieces of the gateway English class's mission at the target research institution, there is a high level of consensus on the core purpose of the course.

Shortening the Developmental Pipeline. Four of the six Instructors spoke about their perspectives on how the newly implemented CGEC model was used to accelerate developmental students earning their first college credits. Instructors 1 and 3 built their statements around the rationale for the updated course model, with Instructor 1 offering a narrative explanation for the creation:

So, the state and the college president were tired of people getting into college and then having to take nine hours of remedial classes in English and then nine hours in math and then this and that to just getting started. So, they came up with the idea of a kind of simultaneous co-req classes.

While Instructor 1 discussed the rationale of why the class was created, Instructor 3 spoke about the thinking behind the type of model that was implemented:

So, this model was considered ideal because you had, first of all, the same instructor in both classes so that they would stick with that cohort. Also, you have the mixed enrollment, the blended enrollment. Hopefully, you get some improvement in the class environment, and it helps the achievement of all students to have that mix.

Instructor 3 exclaimed that the school wanted the same instructor for both sections and that enrollment would be blended with college-ready and non-college-ready students hoping that these factors would increase successful academic outcomes. While Instructors 1 and 3 spoke about the rationale for creating the course, Instructors 2 and 6 shared their thoughts on how the new class model changed their instruction methods.

Instructor 2 stated:

So, with the Comp One side of it, nothing has changed on that side of it... My classes are set up where we do the first 10 or 15 minutes or a mini-lesson or something, whatever the homework was. And then we're actively writing, usually, the rest of the class. So, I've been able to use the tutor to give any extra tips... they're able to get students going, who come in late. So, if somebody walks in the door 10 minutes late and I'm still doing mini-lessons, they can sit down with that student and know here's where we're at, here's what we've done, here's what you need to do now.

Though the embedded tutor was not mentioned by Instructors 1 and 3, Instructor 2 discussed how the embedded tutor freed them up to offer more individualized instruction at the beginning of their course sections. In contrast to Instructor 2's statement about the change an embedded tutor added to their class, Instructor 6 reflected on how the gained experience of teaching CGEC has changed their approach in the developmental portion of the course to offer more contextualized instruction to what the developmental students need to succeed in the credit portion of the class:

Knowing what I know now and having done both, I think that I can blend things better and focus on IRW. I allow them to use that time to work on their papers for Comp-1 and introduce them to some additional skill-type work that they're a little weak on... What I did was develop a unit each week with a quiz and just a little

personal reflection at the end. I had to keep it simple because students were already overwhelmed, but I also tried to hit what I thought they needed the most help with or were required to hear repeatedly. So, I'm not doing just a ton of grammar kind of stuff.

All the Instructors discussed how this new course model led to developmental learners earning their initial English credits faster than if the historic model had continued. As with any drastic changes to college curriculum, alterations were made to this newly paired group of courses to accommodate the freshly blended student populations. Juxtaposing the how and why of the course model, the following set of categories explain the how and why of issues that students faced that would prevent them from being successful in ENGL 1301.

Student Challenges in CGECs

As the corequisite model requires a non-college-ready student to handle an increased amount of coursework in a short period, instructors were also asked questions about the common issues that they saw students as having in CGECs. The questions lead to the generation of the emergent theme of students' challenges in CGECs, which was generated from three categories: (a) student trepidation about taking the pre-requisite, (b) reasons students are lost in CGECs, and (c) different corequisite instructors.

Student Trepidation about Taking the Pre-requisite. Half of the Instructors discussed how students that were required to take the corequisite portion of the class initially did not like the extra work, but eventually grew to like the course model when they saw how much it improved their writing. Instructor 5 speaks about the type of messaging those co-requisite students would offer throughout a CGEC:

I have noticed students who have come in, and they've said, before the co-req, coming in and telling me quietly, like, "Well, I had to take remedial." And they

were very shy about it, very upset about it. I've noticed with the co-req they're like, "Oh yeah, we get to take her twice." They have a lot more confidence in it. So, they see it as not just an embarrassing thing that I have to take this other course. They seem to be more optimistic about, oh, well, I'm good to take the composition with you as well, and I get to take this other course with her too. So, they see it differently. I think.

As was stated by Instructor 5, the non-college-ready students' appreciation for the class grew when they noticed the increased level of confidence they had in their roles as writers. Instructor 1 expressed the same developing sense of appreciation from the non-college-ready students as Instructor 5, but more so from the perspective of the students:

Just because, as I said, these people not only didn't pass quite well enough to test, but they were nervous. You could tell they were a little bit unhappy, quite frankly, that they had to take two classes instead of one... But unlike after the first couple of days in the class, usually, that dissipates, and that stayed for the first three or four weeks until people got the hang of, okay, I see how this is going. This will work. These people are here to help and that sort of thing. So that was the most significant change. It was a little bit more time on task in class, specifically with the writing itself.

Instructor 1 notes, just like Instructor 5, that students' like of the class increased after several course sessions. Like Instructors 1 and 5, Instructor 6 spoke about the learner's growing appreciation of the model but focused more on the physical departure of the college-ready students leaving after the credit portion of the class:

I liked that a little better than having a mix of students. So, always felt it was a little awkward for students in Comp-1 and an IRW that the Comp-1 people would leave and the IRW people would stay... I've had several older adult students in

IRW who give you different kinds of feedback because they're coming back at a different age. So, they see things. Differently, their perspective is different. And I've had students who were like, "I'm grateful I was in this class." And I've even had students who are not in IRW but knew it was there, and they said, "I wish I could be in those classes."

Based on the statements above, it seems that developmental learners had a negative perception of the co-requisite course model as it served as a reminder, literally and physically, of their need for remediation. Yet, once these students had a fuller understanding of the co-requisite course experience, this feeling gave way to unique types of gratitude and appreciation.

Reasons Students are Lost in CGECs. From the data gathered for this portion of the study, it was gleaned that four of the six Instructors mentioned a slight change in how they viewed their students' progress, or lack thereof, for a semester, particularly the developmental students. Instructors 1 and 2 discussed the direct reasons that students would have issues in the classroom, with Instructor 1 speaking more generally about the types of challenges that come up when teaching at community colleges:

So, it's a mixed bag, and it can be tricky. You lose people often and just life, family, job. We don't live in a particularly affluent area. And so, my girlfriend has the car today because she got called into work or something like that. So, flexibility and understanding are vast parts of this while remembering that you have to get the material.

While Instructor 1 discussed issues that could have plagued any student, Instructor 2 specifically mentioned the difficulty that was had by English Language Learning (ELL) students when taking the co-requisite classes, and how it was sometimes necessary to refer those students to other resources the college has on offer to serve that population:

The struggling students are just the ELL, mainly English, not their first language, and they need a lower essential kind of course. Maybe a fast tracker, something that could just kind of get them up to speed. But for most of the students, it seems to be working well. And I think, especially at COM, we have a pretty good structure and a sound support system, which has helped.

Unlike the previous two Instructors, Instructors 4 and 3 mentioned how they modified their teaching approaches to accommodate the challenges the newly mixed student populations faced. Instructor 4 spoke about the lack of contextual background created a disadvantage for developmental students versus their college-ready peers:

Most of us have been building our literacies since birth so our text-based literacies feel familiar although for IRW students, college requires literacies that feel far less familiar. Learning to engage in academic discourse has parallels to students' real-world experiences but few parallels with their high school English class experiences.

Like Instructor 4, Instructor 3 talked about their perception of their students; however, they also mentioned that none of the course material was changed, but that they, as an instructor, felt they worried more and were keeping a closer eye on students' progress for a semester, particularly the developmental students:

I didn't teach the course differently as such, but I did find that I was reaching out to students more and referring students more and dealing with more of what we call the non-cognitive factors where students are not showing up cause they don't feel confident in what they're doing. With the college-ready class, you certainly get some of that as well, but there could be many reasons why students are not showing up. And that's true with the co-req class too, but sort of your first

suspicion is, oh no, they don't think they can do it, and they've lost, or they're swamped or need help, and you worry about those students.

In closing, it appears that most of the instructors noticed some apparent differences in the additional challenges that developmental students were facing in the corequisite model. Some of the instructors went as far as adjusting their teaching practices, but not the content area material, student learning outcomes, and overall rigor of the credit portion of the course.

Different Co-Requisite Instructors. In addition to the personal and academic challenges that faced students, three of the instructors discussed how the implemented co-requisite model gave the college some staffing challenges that it had not encountered before. The model employed by the school called for having the same faculty member teaching the credit and developmental portions of each co-requisite class. Instructor 3 shared how this was not always possible:

So even though our ideal model was to have the same instructor in both classes, we soon found that this was not practical all the time. We began breaking the model sometimes. Not across the board. We didn't abandon our ideal. We just did it sometimes. It depended on instructor availability.

So, Instructor 3 noted that the classes had to be parsed due primarily to instructor availability. In the circumstances outlined by Instructor 3 above, Instructors 1 and 2 discussed some of the unique challenges of teaching a portion of a co-requisite class when a different instructor covered the other section. Instructor 1 offered:

So, I was teaching in 1301, and this other person was teaching the remedial stuff. And I had almost no contact with her. There was minimal kind of, what are you doing? I want to make sure that I'm dovetailing you or anything like that. So,

while the classes were simultaneous, virtually, one was right after the other, the coordination wasn't quite as robust as it could have been from class to class. So, Instructor 1 indicates the type of challenge that arose from having to coordinate the coursework for each portion of a corequisite with another instructor was difficult. Instructor 2 lamented that the developmental students that were placed into this type of situation were not being served as well:

To tailor each, I can't differentiate between each IRW student for the Comp 1301. It's too time-consuming... Do I know if what I'm doing is working in IRW right now? No, I have no idea. Was it working before when I had the same students? Yes. And it was easy to see that it was working based on the grades and the work being done.

There is an apparent consensus among the three instructors who spoke about the co-requisite sections working at their best whenever the same instructor is covering both portions of a class; however, only in an ideal world could that always happen.

Incorporating Embedded Writing Tutors in CGECs

The final emergent theme for RQ4 of incorporating embedded writing tutors in CGECs was generated from three categories: (a) establishing the expertise of the tutor, (b) in-class tutor exercises, and (c) effects of embedded tutoring on academic achievement. The theme focuses on how the faculty adjusted their classroom pedagogy and dynamics to accommodate for the presence of an embedded writing tutor, the types of in-class exercises used to incorporate the tutors into their teaching, and their perceptions of the effectiveness of embedded tutors on students' academic achievement.

Establishing the Expertise of the Tutors. Four of the six instructors discussed the role they let their tutors play in their classroom and how they wove that into establishing the tutor as another source of knowledge and support for their students. Instructor 3 spoke about the core concepts as to why the embedded tutors were chosen as the academic support model for the CGEC model at the college:

As they put it, the tutors were there to be advocates for the students and help the students, and they help them individually, as I understand it, and also after class.

To create a connection to the writing center, I think, was probably one of the most critical roles so that students knew they could get help outside of the class.

Where Instructor 3 highlighted that the model was chosen to have the tutors be a voice within the classroom for the students and a convenient bridge to the campus Writing Center, the other three Instructors focused on how the tutors were able to interact with students in their classrooms. Instructor 2 noted some of the unique experiences they had with their embedded tutors that only occurred since they were professional tutors, not peers:

I have been very fortunate that every tutor I have, two out of three tutors I have had are certified teachers. The other thing they're good at doing is just going around and checking one-on-one to make sure that everybody understands what's going on. They can sit right down with that person, just like I can, and go right through that essay and help them with any of those skills, and they're qualified to do so. So, I feel good about it. That they're getting the best help that they can get.

While Instructor 2 focused more on the perks of their tutors having outside writing instruction experience, Instructor 4 highlighted their use of the tutor as a confidant when giving oral instruction to the class and makes outside attendance of writing tutorials mandatory for the developmental students in their courses:

I also include the tutor and work to have the students see the tutor as their ally and my professional colleague. I always seek the tutor's input while we're having a class discussion and require IRW 0320 students to attend at least three or more tutoring sessions per semester to encourage their increased comfort with the center's valuable resources.

As with Instructors 2 and 4, Instructor 1 seemed to trust the abilities of their tutor but took it a step further by actively encouraging the tutor to come and participate in the lectures by offering a supplemental or differing explanation of the content that was currently being discussed:

They were so integrating the tutors into the classroom so that they were seen as also an expert in the room... My tutors knew they could come up to the board, they could write on it, and I'd just stepped aside because of a different perspective or a different way of looking at it or a different thing... And so that allowed that validation that they were not only a part of the class, but they were again experts in the class and that they had something else to offer even within kind of a lecture or a free flow information sort of moment.

As was expressed to be the desired outcome of the embedded tutoring program described by Instructor 3, the other three instructors their confidence in the prominent utilization of the tutors, and that they considered the tutors a knowledgeable, valuable, and approachable portion of the students' learning experiences in the classroom.

In-Class Tutor Exercises. Outside of establishing the tutors' academic expertise and physical presence, three of the six instructors shared the types of specialized exercises or instructional techniques they could utilize only thanks to the embedded tutor. Instructor 1 highlighted how the presence of the tutor became a natural staple of the classroom environment as if they had always been there through them taking turns working with individual students:

Within my course, the tutor that I had embedded in the class, went well. And I've done that a couple of times. For the first time, he worked with students for the second class I did. They got to know the students as part of just the regular classroom routine and to further the idea that they were an integral part of the class that people could learn from them in a larger setting.

Instructors 5 and 4 both discussed using their tutor similarly to Instructor 1 by letting the tutor become a natural extension of their teaching and conferring with the tutor while lecturing. However, this seems to be more for the added input the tutor can provide versus using this to indicate the instructor's trust in the tutor, as Instructor 5 states:

Anytime I finish, if I'm talking out, I always say, "do you have anything to add? Is there another way?" Because I've noticed that a lot of times, they have another way of clarifying or based on what they see in the tutorial lab, where they're able, they're able to assist on... So, when you break down into groups, they can go and speak to a couple of the groups as well, at the same time.

At the end of Instructor 5's explanation, they shared about having the tutor walk around as an alternative source of information. Instructor 6 discussed how they utilized a similar technique with a slightly different rationale:

I started flipping, doing a lot of flipping in the classroom, which you may have heard from, (another instructor) does a lot of that too. So basically, they spend

most of their time in-class writing. They're working on their papers. So... (what) I figured out to do was look at their papers that they just turned in and try to give them personal feedback as I go. So, I call them over and say, "okay, let me, let's talk about your paper and the things that you could work on, blah, blah, blah." And so, while I was doing that, the tutor was working with them on the current paper they're working on.

So, thanks to the extra expertise the tutor provided, Instructor 6 gave real-time and highly individualized feedback to their developmental students when this likely would not have been achievable otherwise. It seems like the three instructors that spoke about how they utilized the tutor in their classes came to value and trust the presence of the tutors in their classroom.

Effects of Embedded Tutoring on Academic Achievement. In the last category used to derive the theme of instructors incorporating embedded tutors into their classrooms, three of the six instructors discussed their perceptions of the tutors' effects on their students' academic and course outcomes. Two Instructors shared that, while they thought the tutors were helpful, their impact was limited, with Instructor 1 stating:

I do think they have an impact academically. I believe that while the embedded tutor idea's a good one, I don't know that it was utilized as well as it could have been. I do believe that, in some way, we dropped the ball... And I don't think that oversight was nearly as robust or as supportive as it could have been. And I don't blame anybody for it. I think there's been a lot happening. A lot was happening. And so yeah, I think it could have been better is the answer. But I do think it was helpful, I do think people learned, I think another set of eyes on a paper or something, or another set of explanations is never a bad thing, and it seldom happens in higher ed.

As with Instructor 1, Instructor 4 notes that they view the program as a success, though limited in scope, however, they highlight a different rationale for the limited success:

Co-Req students often require intrusive teaching that extends beyond the course content. When there is an embedded tutor, and when I spend more time with those students, I help build their support systems and offer extensive teaching and reteaching as needed. It's often daunting, and often, it doesn't yield success, but when it does, it feels that it wouldn't have happened without the co-req model and embedded tutors.

Instructor 2 shares Instructor 1 and 4's thought that the embedded tutors were a success in achieving their intended purpose of helping developmental students earn credits more quickly, felt without the for reasons some students might not succeed despite the model:

Yes. As I said, I believe it has been a success in terms of the increase in the success rates in students completing English 1301, which gives them a. The whole point of the co-req is to ramp these students up to more quickly so that they don't stay on the developmental track and persist as students and stay in college. I think we see success in that area.

Overall, most of the instructors have a positive impression of the model and thought it was effective in helping students, particularly developmental, achieve improved academic or course outcomes than they would have otherwise.

Research Question 7

Research question seven, *How do students that took ENGL 1301 perceive having an embedded tutor in the course?*, was addressed with the qualitative analysis of data gathered from interviews with twelve students who took various forms of ENGL 1301. As previously mentioned, these students were purposefully sampled for their different English college readiness statuses and whether a tutor was present in their ENGL 1301 sections. As with the instructor interviewees, the student interview participants were given pseudonyms to protect their anonymity. The researcher organized these student pseudonyms numerically into the four different sub-populations. Table 4.8 details the numeric ranges used to break down these student population subgroups.

Table 4.8

Student Interviewee Sub-Populations by Numeric Grouping

Student Number	College Ready	Tutor Presence
1-3	Yes	Yes
4-6	Yes	No
7-9	No	Yes
10-12	No	No

As shown in Table 4.9, there were three students within each sub-population, 12 in total. The researcher analyzed data from all the student sub-population groups simultaneously employing the same data analysis technique used from RQ4 to generate seven categories that revealed two emergent themes: (a) evolving student perceptions of CGECS and (b) student perception and use of writing tutoring. The emergent themes, categories used to generate them, and frequency of statements made during the interviews are displayed in Table 4.9.

Table 4.9

Categories, Themes, and Frequencies of Student Interviews

Categories and Themes	Frequency
Evolving Student Perceptions of CGECs	
Student Perceptions of Co-Requisite vs. Traditional Course Design	6
Students' Perceived Challenges in ENGL 1301	7
Evolution of Students' Self-Perceptions as Writers	5
Students' Perceptions and Utilization of Writing Tutoring Resources	
Students Like the Idea of an Embedded Tutor	4
Limited Use of Embedded Tutoring	5
Use of Writing Center	5
Student Preference for Working with the Professor	5

Evolving Student Perceptions of CGECs

The emergent theme of evolving student perceptions of CGECS was delineated into three categories: (a) student perceptions of co-requisite vs. traditional course design, (b) students' perceived challenges in ENGL 1301, and the (c) evolution of students' self-perception as writers. The critical elements of the theme of evolving student perceptions of CGECs focus on are students' evaluations of the different types of ENGL 1301 sections, the challenges that they identified facing in both forms of the class, and how well they feel the course prepared them for their future classwork and careers.

Student Perceptions of Co-Requisite vs. Traditional Course Design. Half of the twelve students interviewed expressed appreciation of their educational experiences in their ENGL 1301 sections. A pair of students discussed that, despite the increased workload of the paired classes, they grew to appreciate the experience. Student 12, a non-college-ready student that was required to take both sections of the corequisite class without a tutor present, discussed the fact that they perceived the pair of courses not to be very challenging, and had a positive experience in both:

Comp. one was generally easy. During high school, I wasn't much of an English person, but it was just easy throughout my college career. I went through it so fast; it's almost a blur now. It wasn't negative. It was all positive. I learned some stuff that I didn't have, and I showed some.

Like Student 12, Student 10 had a similar appreciation for the pair of courses. The only difference was that Student 10 did not express the same sense that the classes were not challenging:

I feel pretty good. It was a good class, and it helped me with certain things that I had to work on. If we ever had a doubt on this stuff, the instructor would help us learn when to put our commas and punctuation, and she also showed us how to try not to use a lot of slang.

As with Students 12 and 10, Student 3 held another positive impression of the class and discussed how the course helped them lay the groundwork for understanding the basic layout of an essay versus the core mechanics of language such as basic punctuation:

Yeah. It gave me a good outline, structure on how things should be laid out trying to write academically should be laid out. And most importantly, it taught me about good research compared to not-credible research.

Like the first three students, Student 1, a college-ready student who happened to take an ENGL 1301 section with a tutor present, liked the learning experience they received in their English course. Student 1 further discussed the fact that they appreciated the approach that their instructor took to ensure that students made regular progress on their writing assignments:

Our final grade was like this huge paper, but our assignments consisted of working on the paper. So, we would write one or two paragraphs whenever we went to class, type of thing. So, that was fun. That was cool... Like I said that I liked that we worked on our big final projects, kind of throughout the semester. And we would get feedback on the paragraphs we wrote that day or something.

So, it wasn't like our paper was just, oh my God. I might not pass; I might pass. Like the previous four students, Students 8 and 9 spoke positively of their ENGL 1301 experience and expressed an appreciation for the IRW 0320 portion of their corequisite classes. Student 8 expressed appreciation for the guidance they received from their instructor:

I feel like everything (was useful) ... Since I was taking that remedial class, everything I didn't understand, she would cover it in the remedial class. And there was nothing that she made difficult or that I didn't understand.

Student 9, just like Student 8, spoke about specific pieces of the classes that helped. Student 9 offered further detail about the level of help the IRW 0320 portion of the class gave:

Well, yes. I draw a lot by taking the corrective class. It wasn't a waste of time for me. It wasn't a waste of time. Because after the course, I learned a lot about. I learned how to develop my thinking, my writing, put things in order, start writing an essay, and not get lost on the first page. I just was able to produce any paper

and without any problems. I appreciate having a tutor and having that class which helped me to develop my skills.

Overall, regardless of the tutor's classroom presence and whether they were taking both portions of the corequisite class, the students shared the sentiment they had a positive experience in the class and learned about different fundamentals and facets of the writing process.

Students' Perceived Challenges in ENGL 1301. When asked about the challenges they faced in the course, seven of the students shared their experiences. Unlike their positive perceptions of the class, there was a significant variance in their responses. While most of the other students discussed difficulties regarding either the mechanics of the English language or steps in the writing process, Student 9 explained, "For me, the challenge was probably the language. English is my second language. They wouldn't let me use it in class. It was like higher-level capability." Student 9's circumstances as an ESL student were not shared by any of the other respondents, with Student 4 discussing:

Because she made us turn in assignments. Every class we came to, we pretty much had a writing assignment due that night before. So, it was like pretty much almost two things due a week. So constantly having to write ingrained a setup in my head. Well, most of them were she sent you home with a five-to-ten-page, little journal thing you had to read or just a story you had to read-And then you would have to write about it, but it was more than, "How do you feel?" It was a whole bunch of stuff you had to include. So, it helped me also with just any assignments like that now where I have to find some research, and it helps me put it together better.

So, Student 4 exclaimed that their perceived course challenge was regarding the volume of writing they had to produce over their semester, despite only being in the ENGL 1301

portion of the class. Students enrolled in the IRW 0320 portion of the course mentioned having additional writing assignments on top of those in ENGL1301, such as Student 10, who stated:

At first, I would have some complications. Kind of like whenever I had to focus more on a certain lane. I think it's called prompt. Like whenever they give us something to write about. Yes, a prompt. Sometimes, we will get two prompts simultaneously, and I would try to focus more on one than the other one.

Although they were both due around the same time, other than that, that's the only complication I had.

With Student 10 highlighting their difficulties focusing on having either multiple writing assignments at the same time or a particular paper assignment that required them to focus on more than one specific topic, Student 11 differed in that they highlighted their challenge as grammar and punctuation:

We had papers, but I don't think they were too crazy long because I struggle with writing long papers. Maybe simple grammar stuff or punctuation. I don't know why I've never got that down specifically, but graded papers would have comments on what it could be and how that could be changed. So that helped. I don't think there was a bunch of talking about that because prior knowledge to know that is pretty heavy.

In contrast to Student 11, who specifically stated that paper length was not a challenge in their section of the course, Student 12 spoke directly about paper length:

Towards the end, yeah. It got a little tricky as we had to write longer, more complex stories, just in general. I mean, they got longer—a little more complicated like your topic subject as it is throughout the class. It was more of a starting them. I knew about the topic that they were talking about. I couldn't get it

out. I learned how to talk about it, and I didn't know how to start it. And then once I got towards the end, towards to finish it. It was like; I can keep going and keep going and whatnot. I started to get into the story physically. It was just like, man, and I want to keep going. I couldn't finish them. I mean, I would finish them, but that's where most of my points were taken off was the ending.

So, while Student 12 perceived their course difficulties to be due to the length of the assignments in their CGEC, Student 2 spoke about the challenge of overcoming their shyness to find their voice as a writer:

Oh, yes, in the beginning. I'm usually a shy person, and a lot of this is like presentation in the beginning, and presenting yourself, stuff like that. So, I had a hard time initially, but it was a lot better towards the end. Just the way she would, and by her, I mean the professor. She would just put her own experiences out there, and I just felt like, "Okay, I'm not the only one, even if people read this, I'm not going to be the only one going through this," whatever it was, I was ready.

While other students discussed difficulties that arose from the material that was covered in the course or the assignments that were a portion of the experience, Student 7 discussed the challenge of finding willing research participants for a paper in their course:

That was one of my challenges, and then understanding. We did have to do research projects in that class, which was challenging because we had to get participants outside of the class. It was very exciting, but we did have a partner that we could do it with. But it was a group of four people. It was about getting four people, at least, to participate without their name or anything. It was just about the topic] that you were working on for research.

So, as displayed by the variety of mentioned topics, there were different types of perceived challenges among the interviewed students ranging from the volume, length, and types of writing assignments given in their respective sections of the classes.

Evolution of Students' Self Perceptions as Writers. With the final category used to generate the theme of evolving student perceptions of CGECS, five students' statements echoed the overall appreciation for the learning experience indicated within the first category. There was a variance in the students' rationale for offering positive responses while all of their statements indicated they felt that they had grown as writers. Student 1 stated that they gained more confidence as a writer, though they felt their writing ability stayed about the same throughout the class:

It gave me more confidence. I was a better writer than I thought I was... I've always been a writer, reader type of person, but I think, I don't know. I feel like I stayed the same. I just became more aware.

So, where Student 1 felt that while their writing abilities remained the same and they gained confidence through the class, Student 10, and the others quoted below, offered a specific rationale for offering their perceived improvements as writers, stating:

It helped me develop more on my essays because I've always had trouble finding where to start, especially on the conflict and stuff. And then, on my composition, he tried to show me how to start from the conclusion first and then move on up. Just because sometimes we had to write like essays. So, the professor would be like, "if you use the word 'but,' try to find another similar word instead of reusing it." The instructor would help with us trying to find other words instead of using the same word over and over.

Student 10 states they improved as a writer from their professor's advice to start with the conclusion in mind. Similarly, Student 2 shared that they grew more confident in sharing their own experiences due to the openness of their instructor:

Yeah. I felt like I was writing a lot more, a lot freely. So, I'm very conserved. I wouldn't say I like putting my own experiences and stuff, especially when it's school. But the way she put out the assignments and her experiences first, maybe me like, "Okay, I'm comfortable with people reading this other stuff." And even if they don't, I'm okay with that too.

So, whereas Student 2's confidence in their voice as a writer grew due to the openness of the course instructor, Student 4 compared their experience of growing as a writer to the difficulty of their courses in high school and Composition 2, the class taken after ENGL 1301 in the community college's course sequence:

Yeah. I feel like Comp 2 was just like reading some books and analyzing them, but Comp 1 was like, the kick in the butt that you didn't learn in high school that they need to finish teaching you. Even the big, giant research project she gave us, I didn't enjoy it at the time, but with all the other classes I've had to take, 10-page papers are way easier now.

While Student 2 felt that the experience that they gained from the assignments was the key to their understanding of the difference between high school and college-level writing, Student 7 was confident enough in their growth as a writer to offer a numeric scale rating on their improvement:

I feel like on a scale of one to 10. It prepared me about an eight or nine because of some things I did not know. For example, different formats of writing, especially whenever you're typing, the correct format. I was unaware of them, or I was informed incorrectly before I took that class.

Student 7 indicated their reasoning for providing the scale and becoming more aware of the different types of writing covered in the class. In conclusion, student responses indicated that they felt that they had each improved as a writer, except for Student 1, who thought they had just become more aware of their abilities. There was a significant variance in their reasons for offering those statements with reasons ranging from the openness of their instructor, the experience provided by the writing assignments, and the difference in expectations in high school and college-level writing.

Student Perception and Use of Writing Tutoring

The emergent theme of students' perception and utilization of writing tutoring resources was generated from three categories: (a) students like the idea of an embedded writing tutor, (b) limited use of an embedded tutor, (c) use of writing center, and (d) student preference of work with the professor. The critical elements of the theme are that students uniformly liked the idea of writing tutoring, whether embedded or at a tutoring center, and indicated that they felt that other students who were struggling in ENGL 1301 should use the available resources. However, very few used the writing tutoring resources available as many stated they preferred working with their course instructor.

Students Like the Idea of an Embedded Writing Tutor. The first category used to generate the emergent theme of student perception and the use of the writing center was students' perception of the embedded writing tutor in their course sections. The responses to this category were limited to only six student interviewees, as only half of those interviewed had tutors present in their ENGL 1301 section. Four students shared positive reactions to having an embedded tutor in their classroom, though to varying degrees. Student 3, who was college-ready and did not have to take the IRW 0320 portion of the corequisite, had this to say:

Whenever it comes to what I think you're looking for, the resources I had were excellent. It was good. I think it was just the subject having to write. It wasn't anything institutional, or teacher, or anything like that. It was just the actual content of the class.

Student 3's response indicates a positive perception of the overall access and quality of the tutoring resources they had access to during the class but did not discuss using the services. Student 9, and the others quoted here, were not college-ready and took the IRW 0320 portion of the class, also expressed a positive perception of the tutor's classroom presence:

Okay. Yeah, really. So, when I started college, it was pretty hard because I tried the TSI ten times and didn't even pass the reading portion. And to be honest, it was a very great experience being there, and we have a tutor in class, and she was very helpful, and it is impressive how I improved my thinking and my writing after the course.

Student 9 indicated that the tutor was helpful, and this sentiment was echoed by Student 7. Student 7 expressed their appreciation and that of their classmates of the embedded tutor:

Yes. It was very helpful. I noticed it also helped other students too. I thought I was the only one that needed help. But no. Several other students also needed help. She would also be in the tutoring center, so sometimes, we would go over there with her after class. She would go over our papers for the class. If there were any questions or just wanted someone to read over it and revise it, she would.

Student 7 appears to be comforted by the fact that they were not the only ones who utilized the tutor in class. Like Student 7, Student 8 indicated that the tutor's presence

was appreciated and that the tutor was an asset whenever the professor was not available for direct help during class time:

I feel like it was good to have her there, just in case. When the professor was busy or something like that. And also, it was nice when I saw that tutor in the tutoring room when I was trying to go for another class. It was like just a familiar face instead of going to a tutoring center and not knowing anyone.

Student 8 continued to express that it was comforting to have a familiar face that they were familiar with versus academic support that they would not have been familiar with through the Writing Center, should the tutor have not been present in the class. In conclusion, the students who had tutors present in the class had a mostly positive impression of the embedded course tutor through the shared sentiment of knowing the additional support was there if they needed it.

Limited Use of Embedded Tutoring. Like the last category of student perception, only half of the interviewed students were able to discuss the limited use of embedded tutors, as the other half did not have an embedded tutor in their ENGL 1301 course section. While there was some variation in their rationale, these responses indicated that the students used the tutors rarely, with only one exception. Five students spoke about this, with Student 9 as the stand-alone response that indicated they worked with the tutor a good deal during class time:

I've been working with the tutor. She was very, very helpful. And she helped me out a lot during this class. There was not a big challenge, and I ended successful in class... Yes. Yes. This tutor, I've been working with her a lot. She helped me a lot. I learned a lot of good and notes from her about improving my writing and putting my work in order. That was one of the big reasons I ended up being successful in class because of her.

Unlike Student 9, the remaining students did not indicate that they used the tutor in the classroom much. Student 8, who shared the non-college ready status with Student 9, stated, “From what I remember, I don't think she helped much.” This matches closely with college-ready Student 2 who said:

I don't remember. Not necessarily because all our stuff was like journaling and research and things like that, so I can't remember. I can't tell, but there was a student there. I don't know if that's what you call a tutor? Yeah, so it was a student from another class that she'd had before.

As with Students 2 and 9, Student 3 did not utilize the tutor during class time but seemed to be more aware of the tutor's classroom presence. Student 3 also expressed regret about not using the tutor due to having to repeat ENGL 1301 more than once:

I never utilized the tutor. I think that I probably wouldn't have taken the class three or four times if I had. So, that's something to be said for that. It was really at the time because it was a couple of years ago. It was just lack of interest and thinking I could handle it without any help, which is not the case.

Like Student 2, college-ready Student 1 indicated that they were aware of the presence of the tutor but never took advantage of their services, stating, “I don't remember ever having to ask her anything. ... But I mean, other kids got a lot of use from her.” So, it seems that Student 1's classmates used the tutor, but they did not. It appears that there was only heavy utilization from one of the interviewed students, whereas the other students did not utilize the available embedded tutoring resources despite their awareness.

Use of the Writing Center. In contrast to the student interviewee responses that indicated a low amount of usage for embedded course tutors, there was a myriad of five reactions that showed various usage levels of writing tutors at the Writing Center. There was also a wide range of various rationale on the students' part for using the writing

tutoring resources. Student 9, the lone student who mentioned heavy utilization of the available embedded tutoring services, indicated that they worked heavily with the tutor outside of the classroom within the Writing Center as well:

On the same topic, the 1301 class, or IRW class. So, I worked with the tutor in class, in the 1301 class when we go to the IRW class. But I also looked for her outside class, like whenever she was available at the tutoring center, I made an appointment with her and worked with her outside of class.

Like Student 9, Student 5 also utilized the writing tutoring services available at the Writing Center, though the recommendation for the Center services came from somewhere beyond that of their class:

Yeah. I heard it towards the end of it. I knew roughly that we had one because of the new student orientation. I didn't know how much they could help until towards the end, essentially towards my final exam to help more into what class I'm taking. Yeah, it came from working at my job off-campus. That was one of the specific things they wanted to talk about, where I learned more. I was like, "Hey, they help with all these types of things." Yeah, I used it. So, when I realized how much they do, I was trying to write my final exam paper. So, I went to them and got some help on refining it. And they also knew like the English teachers and a bit more like how they like their stuff.

Like Students 9 and 5, Student 12, a corequisite student without an embedded tutor, mentioned that they went to the Writing Center a few times towards the end of their CGEC experience, "I believe I used them once or twice towards the end, whenever we were writing our bigger papers—just starting them. That's where I have most of my problems start." Student 3, a non-co-requisite student, also discussed going to the Writing

Tutoring Center for a unique reason beyond that of just receiving the writing tutoring services:

I believe I went to the Writing Center. I think it was called because, in one of my Comp classes, I want to say, it was an extra credit kind of deal. But technically, yes, I did. But did I go because I wanted to go? Not necessarily.

Interestingly, Student 3 had an embedded tutor present during their class, so the instructor offered extra credit to visit the Writing Center despite that fact. Finally, Student 10, a non-college-ready student without a tutor present in their class, stated:

Yeah. I never went in there, but the instructor told us if we ever needed help and he wasn't available, we could go in there anytime, and they could review our work. I guess it was just that my work schedule would be kind of complicated. And then whenever I was taking comp, I was taking three other classes simultaneously, so I didn't have a break in between to go.

So, based on these responses, there was not much consensus or rationale as to why or when students utilized writing tutoring services at the writing center. Some students used the Writing Center for its services directly, one student attended them strictly for extra credit, and others did not utilize the services.

Student Preference for Working with the Professor. The final category was created from five student statements that indicated a preference for working with their instructors versus a professional tutor. The grouped statements all share the common trait that the students felt that working with their instructor would provide some unique benefit or advantage that working with the tutor would not. Student 1 spoke about this to their understanding of course assignments, stating, “If I had a question about something or didn't understand a part of the assignment, ... I instead worked with my professor.” Student 2 shared this sentiment and offered their rationale as a personal admiration for

the instructor, “No, I mean, if you're dealing with that professor, you have to keep (them) because (they are) pretty awesome.” Like Students 1 and 2, Student 7 indicated that they preferred working with the professor because they felt that since the instructor was the individual creating and grading the class assignments:

I appreciated that the professor didn't mind helping and that there was also a tutor there. So, if my professor wasn't able to help or help someone else, she could help... I did not work with the tutor not as much as the professor if they were both always busy with at least one student or with two students. Just because since the professor's the one teaching the class, I like to be more direct with them and understand from them that they are the ones who are mainly teaching the class. Nothing against the tutor, but it's just better understanding.

These responses were not just limited to the students who had embedded tutors in their ENGL 1301 section but also those who just had access to the Writing Center, as Student 6 shared the same sentiment as Student 7, saying:

I mean, usually, it was just about the assignments, and most of the time, it was when we were writing a paper or something. I just wanted to get her feedback, like sometimes I would get stuck. I guess I have a tough time arranging my thoughts. So then, if I were writing a paper, I would stay after class and kind of show her where I was at and get her feedback to see if I was doing it in the correct order, or if it makes sense in that order, but I think it was mostly that.

The lone student who did indicate a preference for working with an embedded tutor was Student 9, who also discussed working heavily with their embedded tutor during class time. They stated:

Well, both of them helped me a lot. (My) professor was there if I had questions. She was always available for me. And for any student, if we have any questions.

But I was more working, personally, with the tutor because she has a lot of time outside, and I was able to go there and find her and work with her like one on one-And starting to organize all my ideas.

So, outside of the lone outlier of Student 9, most students preferred working with their instructors, with one of the most mentioned reasons being that the students felt better receiving instruction and feedback from the individual who instructed the class, and created, administered, and graded all the assignments.

Summary of Findings

For the first and second research questions, a statistically significant difference was found in academic outcomes for students in ENGL 1301 based on college readiness classroom, but not tutor class presence status. For the third and fourth research questions, the chi-square analyses that were conducted found that there was a statistically significant relationship between tutor class presence and college readiness to ENGL 1301 course outcomes. The analysis conducted for the fifth research question found that tutor classroom presence and college readiness status were predictive of students' academic outcomes in ENGL 1301, with a variance of 2.4%. Upon examining the results from the quantitative analysis, tutor classroom presence and students' college readiness levels are related to successful academic and course outcomes, albeit with a low rate of variance. College readiness had a more significant impact than students having access to an embedded tutor during class time, which aligns with the results reached by Cui and Bay when they conducted validity testing for the TSIA (2017).

The qualitative analysis of the data from the instructor interviews for RQ6 led to the generation of three emergent themes: (a) evolving faculty perceptions of CGECs, (b) student challenges in CGECs, and (c) incorporation of embedded writing tutors in CGECs. The analysis conducted on the student interview data for RQ7 created two

emergent themes: (a) evolving student perceptions of CGECs and (b) students' perceptions and utilization of writing tutorial services. Instructors had predominantly positive things to say about both the CGEC model used at the community college and embedded tutors in their classrooms. They all shared, in some form, that they thought that the overarching goal of helping developmental students earn their initial English credit faster had been a success, albeit not a perfect one. Though it was evident that the students who had embedded tutors in classes appreciated that they were there, the students did not regularly take advantage of the tutor's services during class or in the Writing Center. The learners indicated they preferred working with the instructor as they felt the instructor would give better advice to improve their writing and assignment grades.

Conclusion

This explanatory sequential mixed-methods study used archival academic outcome data and interview data from course instructors and students who participated in CGECs at a community college for quantitative and qualitative analysis to investigate the effect of embedded tutors on students' academic outcomes in those students' classes. The conducted Mann Whitney U tests found a statistically significant, although mild, difference in students' academic outcomes in CGECS based on college readiness (RQ1), but not tutor class presence (RQ2). A pair of Chi-squared tests responded to RQ3 and RQ4 and proved the association between students' college readiness and tutor classroom presence to the learners achieving successful course outcomes in CGECs. The final quantitative analysis (RQ5) was a multinomial regression that indicated college readiness and tutor classroom presence were predictive of students' academic outcomes. The qualitative analysis conducted on data from instructor interviews to respond to RQ6 generated the emergent themes of evolving faculty perceptions of and practices in CGECs, student challenges in CGECs, and incorporating embedded tutors into CGECs.

Finally, the qualitative analysis conducted on the student interview data for RQ7 generated two emergent themes: evolving student perceptions of CGECs and students' perceptions and utilization of writing tutoring resources. In Chp. V, the researcher will discuss the results of this study compared with those of similar studies, the implications, and limitations of this research, and make recommendations on further research that can be conducted on this topic.

CHAPTER V:
SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

The purpose of this explanatory sequential mixed-methods study was to investigate the impact of embedded tutoring on students' academic and course outcomes in Corequisite Gateway English Courses (CGECs). This chapter presents the conclusions that were reached from the conducted research, including a summary of the key findings, implications for current practice, and recommendations for further investigation.

Summary of Results

This explanatory sequential mixed-methods study conducted quantitative analysis on archival data of learners' academic and course outcomes in ENGL 1301 concerning college readiness and tutor classroom presence, and qualitative analysis on instructor and student experiences within the same class sections. The first two research questions were responded to with Mann-Whitney U tests that found a statistically significant difference in academic outcomes with college readiness, but did not find a statistically significant difference based on embedded tutor class presence. The Chi-Square tests of Independence conducted for the third and fourth research questions found a statistically significant association between tutor class presence and learners' college readiness to their course outcomes in ENGL 1301. The results indicated a consistent positive relationship between tutor class presence and students' college readiness to achieve desirable academic and course outcomes in ENGL 1301; however, the impact was limited in nature, particularly for tutor classroom presence. The multinomial regression conducted for the fifth research question proved statistical significance in tutor class presence and students' college readiness in predicting their academic outcomes in ENGL 1301.

Qualitative analysis was conducted on data gathered from interviews with six instructors who taught and twelve students who took CGECs at the target institution to respond to the sixth and seventh questions. For RQ6, three emergent themes arose from the analysis of the instructor interview data: (a) evolving faculty perceptions of and practices in CGECs, (b) challenges in CGECs, and (c) incorporating embedded writing tutors into CGECs. These themes indicated that the instructors had positive impressions of having embedded tutors in their classrooms, integrated the tutors into their classroom practices, and encouraged the utilization of those resources. However, despite those facts, they acknowledged that the tutors could have had a more significant impact if there had been more planning and instruction on the deployment of the academic support asset. Similar emergent themes arose from the analysis of the student data for RQ7: (a) evolving student perceptions of CGECs and (b) students' perceptions and utilization of writing tutoring resources. The sentiments of the students were like those of the instructors in that they appreciated the fact that the embedded tutors were in the classroom. However, they did not regularly take advantage of the available services due to a preference for working with the instructor or feeling like they did not need additional assistance despite the proximity and convenience of the tutor being in their class.

Academic and Course Outcome Data Analysis

Of the 2,920 different students that took ENGL 1301 at the target community college, there were a total of 3,103 course outcomes, which include some of the students repeating the course. Table 5.1 details the course outcomes related to students' college readiness and tutor class presence. According to other portions of the study, college readiness was the better determinant of a successful course outcome than tutor classroom presence, which is supported here. Students with a tutor present in their class (N=581) had a slightly lower chance of reaching a successful course outcome (74.18%) than

students who did not have a tutor present (N=2,522, 78.67%). This implies that embedded tutors were not able to completely mitigate the achievement gap between the two control groups. This is echoed in the fact that there was a 10.68% achievement gap when looking at successful course outcomes based on college readiness.

Table 5.1

Course Outcome by Tutor Class Presence and College Readiness

Categorizing Characteristic		Course Outcome	
		Unsuccessful	Successful
Tutor Class Presence	No	21.33% (N=538)	78.67% (N=1,984)
	Yes	25.82% (N=150)	74.18% (N=431)
College Readiness	No	32.91% (N=130)	67.09% (N=265)
	Yes	22.23% (N=602)	77.77% (N=2,106)

Regarding students that completed their course attempts without withdrawing, Table 5.2 indicates the academic outcomes based on whether a tutor was present in the classroom. Of note is the number of students passing or failing the class based on tutor class presence scales well. Of the 530 students that had a tutor present on their completed attempts, 99 of the attempts were not passing (18.7%), versus 358 non-passing academic outcomes out of the 2,298 without a tutor present (15.6%) presenting a narrow window between the unique populations. In short, students without a tutor stood a slightly higher

chance of passing the class. However, this is a narrow margin given the amount of resources the community college devoted to the embedded tutoring program for CGECs.

Table 5.2

Tutor Class Presence and Academic Outcomes

Tutor Present	Academic Outcome				
	F	D	C	B	A
No	8.9% (N=261)	3.3% (N=97)	10.5% (N=308)	24.3% (N=698)	31.9% (N=934)
Yes	14.0% (N=74)	4.7% (N=25)	10.9% (N=58)	23.4% (N=124)	47.0% (N=249)

Table 5.3 details academic outcomes versus a student’s college readiness status. There is not the same type of scalability of successful academic outcomes with tutor class presence; however, college-ready students were less likely to fail the class, with 14.6% of them not passing, versus 27.0% of the non-college-ready students failing the course.

Table 5.3

College Readiness Status and Academic Outcomes

College Ready	Academic Outcome				
	F	D	C	B	A
No	2.5% (N=71)	1.0% (N=27)	1.7% (N=47)	3.4% (N=96)	4.3% (N=122)
Yes	9.3% (N=264)	3.4% (N=95)	11.3% (N=319)	25.7% (N=726)	37.5% (N=1,061)

Research Questions 1

The quantitative analysis conducted for RQ1, *Is there a statistically significant mean difference in academic outcome for ENGL 1301 students based on college readiness?* indicated that there was a statistically significant difference in students' academic outcomes based on their college readiness. This does make sense as similar results have been well documented in studies that examine college readiness as a success predictor (Gaertner & McClarty, 2015; Venezia & Voloch, 2012). It also aligns with the findings for RQ3 that there is a relationship between college readiness and achieving a successful course outcome in ENGL 1301. Though the 1.0% variance indicates that there is not a large level of variance among the academic outcomes of students based on college readiness, no such connection was able to be made between tutor class presence and differences in students' academic outcomes.

Research Question 2

RQ2, *Is there a statistically significant mean difference in academic outcome for ENGL 1301 students based on tutor class presence?* found that there was not a statistically significant mean difference in academic outcomes for students based on embedded tutor class presence. This aligns with one of the emergent themes from the qualitative data for RQ6, in that many of the students did not work with the tutors during class time because they preferred working directly with their instructor, and it contradicts Alba's finding that students preferred working with the tutors because they found them easy to relate to (2016). This is possibly because the embedded tutors used were professional, not peer, and may have impacted the students' perceptions of the tutor as not on the same level as themselves. Thus, students may not have been as comfortable with the tutors as the students in Alba's 2016 study.

Research Question 3

To respond to RQ3, *Is there a relationship between college readiness and ENGL 1301 student academic outcomes?* a Chi-squared Test of Independence was conducted to determine whether an association existed between tutor class presence and students' academic outcomes in CGECs. Academic outcome was measured as the letter grade that the student earned in the class, F, D, C, B, or A. College readiness was measured as yes or no, as this variable was the status that classified the students. The college readiness numbers were stronger than Cui and Bay's findings during their instrument validation of the TSIA (2017). Whereas 85.4% of college-ready students passed the class, only 72.9% of non-college-ready students earned a passing grade in the course. However, this still indicates that the CGEC model was having the desired effect of getting developmental students to earn their ENGL 1301 credit more quickly. Thus, displaying college readiness as a better indicator of success aligns with other studies that confirm the same fact (Venezia et al., 2012; Horn, 2014).

Research Question 4

To respond to RQ4, *Is there a relationship between tutor class presence and ENGL 1301 student academic outcomes?* a Chi-squared Test of Independence was conducted to determine whether an association existed between tutor class presence to students' academic outcomes in ENGL 1301. Academic outcome was measured as the letter grade that the student earned in the class, F, D, C, B, or A. Tutor class presence was measured as yes or no, as this variable was the status that classified the students. The chi-square analysis to respond to RQ4 indicated a significant association between tutor presence and academic outcome. It seems like tutor presence had a small positive impact on students achieving passing academic outcomes in CGECS. However, this could be attributed to the fact that ENGL 1301 sections with tutors present had mixed student

populations of college-ready and non-college-ready students, which is a confounding variable. Also, as detailed in the qualitative portion of the study, instructors used their embedded tutors in different ways. This could also play a role in creating this achievement gap.

Research Question 5

The multinomial logistic regression for RQ5, *To what extent are tutor class presence and college readiness predictive of students' academic outcomes?* found that tutor class presence and college readiness are predictive of students' academic outcomes at a variable rate of 2.4% (pseudo-r² = .024). As with the results from some of the previous research questions, there was a small level of variance shown with both independent variables. This rate of variance could have possibly been increased if there had been a more standardized means of embedded tutoring practices put into place and/or if the consistency of instructor had been maintained for the corequisite sections of ENGL 1301.

As with RQ1 and 2, there is not another study with a sample size this large to compare these results with that focused exclusively on CGECs, but there are echoes of this fact in the meta-analysis conducted by Hern (2012). The key difference between this study and Hern's lay in the fact that students were given the option to take a CGEC or a traditional developmental course pathway, with the outcome data from that study being like that of this one.

Research Question 6

Research Question 6, *How do the ENGL 1301 instructors perceive having an embedded tutor in the course?* was addressed by conducting a qualitative analysis of the data gathered from interviews with six ENGL 1301 course instructors at the target institution. The investigation revealed that instructors did have a positive perception of having embedded tutors in their classes, used the tutors as a means to allow more individualized instruction from the tutors and themselves, noticed that having another academic professional in the class changed the dynamic, but most did not feel that the tutors had a significant impact on improving students' academic outcomes. The quantitative portion of the study echoes this fact in that tutor presence did not lead to better academic outcomes for most students, with only a small portion seeing a benefit. Thus, it seems that the professors' shared experiences, while genuine, did not play out in the significant fashion that was desired. There were three emergent themes generated from the data analysis in Chapter IV: (a) evolving faculty perceptions of and practices in CGECs, (b) challenges in CGECs, and (c) incorporating embedded writing tutors into CGECs. The critical components of these three themes were that the faculty had a positive perception of the presence of the embedded writing tutors in their classes, trusted and valued their input for the students, utilized them in various ways in their unique sections, but felt the academic support efforts had fallen short at having the desired positive impact on the academic and course outcomes of their students.

Evolving Faculty Perception and Use of Embedded Tutors. The interviewed faculty members that indicated they had a high degree of appreciation of the tutors also seemed to be the heaviest users of the tutors for in-class activities, which was echoed when they were also speaking about the purpose of the ENGL 1301 course, particularly Instructors 1, 3, 4, and 5. They each shared some sense that a gateway English course

needed to serve as a type of bridge to get students comfortable with college writing, academic research, and critical thinking throughout the process to develop insightful writing. The activities that the instructors employed for the embedded tutors and their students seemed to be aimed at enhancing these skills within their students. Like instructors interviewed at other institutions, four of the six instructors focused on the tutor facilitating some open writing lab (Epstein & Draxler, 2020). Such circumstances could not be created without an embedded tutor present. These findings appear to further affirm what has been found in similar studies where faculty members typically held positive views of embedded tutors and their impacts (Alba, 2016; Bleakney et al., 2020; Carpenter et al., 2014; Schubert, 2017).

There was also an instructor that gave students one-on-one feedback as they graded their previously submitted work. The idea of this exercise is that it gives students time to work on their class assignments with the option to utilize the tutor if they wish and free up the instructor to offer detailed feedback to achieve better results on future assignments, one of the previously documented strengths that is unique to embedded tutoring (Grobman & Spigleman, 2005). As the faculty member would have been focused on working with the individual student in front of them, they likely would have been unable to pay attention to the level at which the tutor was being utilized in these types of exercises. This aligns with Webster and Hansen's (2014) findings that the presence of embedded writing tutors made instructors more in tune with the individual needs of their students. While the tutor's presence allowed the faculty member to work with an individual student without concern, it did not mean that students would work with the tutor during these times, as that was an optional portion of these exercises. This could explain why the faculty members felt that they had used the tutors significantly, while there was a minimal impact of the tutor's presence positively affecting just a minor

portion of the students who could access their services. This sentiment is echoed by the lack of recollection and/or non-use of embedded tutors discussed by most of the interviewed students for RQ7.

Challenges in CGECs. Some unique challenges arose for instructors because of the co-requisite model itself. Students who had to take the developmental portion of the class would arrive earlier or leave later than their college-ready peers who did not have to attend the extra course section and would thus have been placed at a higher risk of the typical negative stigma associated with taking developmental classes (May et al., 2021). Yet, if the developmental students were facing any of those negative feelings, they could have given way to an appreciation of the course model, as stated by Instructor 5. The dissipation of those perceived feelings of the students through the instructor's eyes corroborates the development of the student's self-perception as writers that were noted in the data analysis for RQ7 and is a sentiment shared by the students in the Blaauw-Hara et al. study (2020).

In conjunction, half of the instructors discussed another unique administrative challenge presented to the college because of the corequisite model itself, the teaching inconsistencies that arose when the same instructor was unable to be assigned to both class sections due to instructor availability, specifically mentioned by Instructors 1-3. Consistent teaching practices and pedagogy are crucial to the success of similar corequisite models (Bleakney et al., 2020; Bosley et al., 2021; Christie & Gaillet, 2020). It is no wonder then, that instructors who fell in the situation of teaching these spilt sections would have difficulty in using the developmental portion of the class to support the efforts of the non-college-ready students in the credit portion of the class.

Finally, the instructors also discussed issues that would typically affect student success in an introductory college writing class, regardless of its corequisite status,

including students being from a low socioeconomic background, or first-generation (Bailey et al. 2010). While these types of challenges are typical for students who enroll at community colleges, there was consensus in the instructor's responses that the issues were more prevalent in the non-college-ready students, as discussed by Instructor 3 (Kim et al. 2021; Ricks & Warren, 2021). This suggests why there was so much commonality with the data analysis for RQ7 that most students, with or without an embedded tutor present, did not utilize writing tutoring resources during their ENGL 1301 sections, and why college readiness was the better predictor of academic success than tutor presence in the classroom (Cui et al. 2016).

Incorporating Embedded Writing tutors into CGECs. Regarding RQ6, the final emergent theme was incorporating embedded writing tutors into CGECs, which was based on categories and statements explaining how the instructors used the embedded tutoring assets in their classrooms. Most of the interviewed instructors indicated that they had taken some form of direct action to introduce the tutor and their role during class to their students, and made special efforts to include the tutor during in-class activities (sometimes even instruction). However the tutors did not have a significant positive impact on the educational experiences and academic outcomes their students had during their courses, like similar studies (Epstein & Draxler, 2020; Marshall et al., 2019; Mendoza & Kerl, 2021; Miller, 2020).

Despite these efforts, there was minimal utilization of the embedded tutors by the students that had access to them, as is discussed in the qualitative analysis conducted for RQ7. This contrasts with the embedded tutors placed into the ENGL 1301 sections that were the basis for Alba's 2016 study, where the student interviewees expressed a higher utilization level. A point comparison of the two studies was that the student population in Alba's (2016) study seemed more confident in the tutor's understanding of the

coursework, which is corroborated by the statements from five of the twelve interviewed students for RQ7. The students expressed that they perceived that the instructor had more contextual knowledge of what they would be graded on for their assignments, so it appears that the instructors' willingness to help the students worked against the student usage levels of embedded class tutors contrary to Abla's study (2016).

Professors 1 and 4 indicated they felt the tutors had not been utilized to their full potential due to a lack of guidance to the faculty on how to best use the embedded tutors as a resource for their students. This highlights one of the key differences in the embedded tutoring model that was deployed, the lack of a mandatory participation requirement for the student to utilize the tutoring resources in or out of the classroom, which likely played a role in the student's non-usage of the tutors (Adams, 2020). Other models that incorporated tutoring required students to attend tutorial hours outside of class time (Vandal, 2016), however the corequisite (IRW 0320) requirement of this course model could have bridged that achievement gap even without an embedded tutor present.

Research Question 7

Research question seven, *How do the ENGL 1301 students perceive having an embedded tutor in the course?* was addressed with the qualitative analysis of data gathered from interviews with twelve students at differing college readiness and embedded tutor presence statuses. The students highlighted a myriad of challenges that they dealt with in CGECs, such as the length or amount of their writing assignments, though these were essentially the same as those highlighted by students in standard gateway English classes (Caron, 2019; Carter, 2018). They also expressed that they appreciated the fact that the tutors were in the classroom, or, for the students that did not have a tutor in their class, they would have preferred a tutor had been there. Two themes

emerged from this analysis, evolving student perceptions of CGECs and students' perceptions and utilization of writing tutoring resources. Much like with the instructors, the students expressed predominately positive views of the CGEC model they experienced and, for the students who had an embedded tutor, an appreciation that they had direct access to a tutor during class time. Yet, as with the instructors' responses, the students indicated they did not take advantage of the proximity and access to the tutors during class time because they felt they did not need the additional help or preferred working with the instructor.

Evolving Student Perceptions of CGECs. Based on the student interviewees' responses, all the non-college ready students that were required to take the joint IRW 0320 and ENGL 1301 sections as part of the CGEC model were initially displeased with the course model due to the increased class time and workload at the beginning of the semester. This does affirm the negative stigma that is highlighted by Jaggars et al. (2013) and May et al. (2021) in their respective studies. However, these negative feelings eventually gave way to an appreciation for the accelerated course model's learning experience, which was an observation that the instructors discussed in their interviews as well. This notion is also echoed in similar studies that discuss CGEC models that require additional effort beyond the core gateway course (Bosley et al., 2021; Fournier, 2018; Shanahan, 2018).

There was not a significant variance in what the students who took the CGECs identified as the challenges they were facing versus those that took ENGL 1301 on its own. Most of the common responses amounted to not knowing where or how to start the writing process and writing long papers. These are typical issues highlighted by students in first-year writing classes regardless of whether the courses are standard or corequisite. This further reaffirms the idea that was discussed in other studies that CGECs are

effective in helping students address their varying skills gaps just as effectively in a shorter time than the historic developmental course pipelines (Blaauw-Hara et al., 2020; Bosley, 2021).

Finally, regardless of college-readiness status, all the students typically felt that the class had improved their writing abilities and prepared them well for the coursework that would come after ENGL 1301. These responses are corroborated by the quantitative data that suggested the updated CGEC model was having the desired effect of helping more students pass ENGL 1301 in their first semester. However, this seemed to be more so associated with the CGEC model itself and not so much with the presence of the embedded tutors in the classroom, further discussed below.

Student Perceptions and Utilization of Writing Tutoring Resources. With four of the six interviewed students that had an embedded tutor in their class offering some type of affirmative statement, it was evident that most of the students liked the idea of having an embedded tutor in their ENGL 1301 section. The problem began to arise when most of those same students discussed using those embedded tutors rarely, if ever. The course instructors made obvious efforts to integrate the tutors into their classes; however, those efforts did not translate into their students working with the embedded tutors in their classrooms, as shown by the students' responses.

This is in direct contrast to the experiences that Alba (2016) and Schubert (2017) discuss in their studies, where their student interviewees made more affirmative statements regarding embedded tutor utilization in and out of the classroom. The student interviewees in this study indicated that they seemed to utilize the available writing tutoring resources more outside of class time, but this was often tied to class requirements or extra credit from their instructors, not necessarily because they needed to utilize the services of the Writing Center. What might explain these circumstances was that many of

the student interviewees expressed a preference for working with their instructors because the student perceived the instructor would offer more precise guidance on achieving better outcomes on their assignments.

Limitations of the Study

As with any study that uses data from a single institution, the quantitative analysis was illustrative of a pair of courses taught at a specific college. The qualitative research included interviews with six instructors and twelve students from only that school. The qualitative data were illustrative of their unique experiences, and the researcher was dependent on the interviewees' honesty in their responses to the questions. The interviewees were informed that the study results would eventually be published, which may have influenced some of their responses.

Also, the instructors were teaching ENGL 1301 courses based on the same set of student learning outcomes and assignment expectations. The teaching style and methods varied depending on the instructor. Thus, the same encounters might not be directly replicated due to differences in instruction methods at other institutions. If a similar study were run, the researcher could focus exclusively on a single instructor or select instructors that closely mirror teaching styles to control for this.

Finally, the researcher was also unable to account for student involvement in ENGL 1301 sections. This study was conducted on a relatively small scale given the broadness of its topic, and a limited number of participants provided the data. These factors might hinder the generalizability of the findings to types of learning environments that do not share common elements compared to where this study was conducted. To account for this, other researchers could widen the number of institutions that data is gathered from to attain a slightly more generalizable analysis due to the increased diversity that could be achieved with a larger sample size.

Recommendations for Further Research

Given the outcomes reached from the research conducted for this study, several topics come to mind when thinking about the next logical steps for continued research on the effectiveness of embedded tutoring in CGECs. The first would be that this study primarily analyzed the tutoring practices' effectiveness and students' college readiness status. Thus, it might be helpful to isolate one or both types of college readiness populations and examine them separately versus the effectiveness of the tutoring practices. A confounding variable in this study was that college-ready students might be placed into a class with a tutor present. The researcher assumed that these were stronger students than the non-college students. Isolating the populations from one another both in class and analysis might offer a clearer picture of how large an impact the tutoring practices have.

Second, one of the themes from RQ6 indicated that most of the interviewed faculty members attributed a large amount of success to this CGEC model to learners having the same instructor for both course sections of their CGEC. This would allow the faculty and tutor, assuming one was present, to spend more time working one on one with the non-college-ready students. Having different instructors for both classes made it difficult for faculty to align what was being done in one class to support the other, whereas this was relatively easy when both were under the same faculty member. A similar study to this could be constructed to account for this fact.

Finally, this, and many other studies of corequisite models, were conducted at a community college. The number of students being admitted to universities with developmental needs is lower than that of community colleges, but the outcomes are not all that different (Complete College America, 2017). It would be insightful to see if

similar academic support and corequisite course models yielded similar results at another type of institution.

Implications for Practice

As a result of this study's look at the unique circumstances and deployment of a CGEC model at a Texas community college, several outcomes were identified, needs for further analysis were raised, and suggestions for future practices were revealed. This study, compared to others that were previously and concurrently published, indicates that the CGEC model that was deployed at the target institution was at least as successful as similar models at other institutions, though this was due to the course model, not the embedded tutoring supports (Belfied et al. 2016; Bosley et al., 2021; Carter, 2018).

According to the analysis that was conducted, college readiness was the better predictor of successful academic and course outcomes versus embedded tutor presence in the CGECs. This leads to the logical conclusion that there needs to be a steady and logical deployment of college's academic support resources, including embedded tutoring, and faculty presence, that are guided by data-driven practices and consistent implementation to achieve the desired outcome of student success.

Embedded Tutoring and the CGEC Model

The quantitative and qualitative data analysis results bear similar results to others who have examined similar co-requisite gateway course models (Bosley et al., 2020; Christie & Gaillet, 2020), in that the overall academic success numbers of students earning their English course credit were in line with the national averages and the students felt they had a good course experience that prepared them for the challenges that awaited them in their future course. The consensus remains that if institutions are thoughtful in their deployment of their chosen model and stay realistic with their expectations of the model, then they should be able to expect similar results to this study.

Though, it seems that mandating participation in whatever additional support is being provided to non-college-ready students is the most prudent path to achieve the best results. As was demonstrated by the required student participation in IRW 0320 for the CGEC model that was discussed in this study, in that students initially did not like the additional time and work dedication that was required for the class but later expressed positive perceptions of what they gained from the experience. The reverse truth was also displayed in that the students expressed an appreciation for the fact whenever an embedded tutor was present in their class but did not take advantage of the resource.

It does not appear that the embedded tutoring services had the desired impact of increasing successful student academic outcomes in CGECs. While other similar studies reported a suggest a significant positive correlation between the unique academic support mechanisms that were deployed (Alba, 2016; Schubert, 2017), this study indicated that the embedded tutoring presence had a negligible positive impact. As indicated from the interviews with the faculty members and quantitative results that examined the effectiveness of embedded tutors in improving student academic outcomes, there needs to be a guided approach when deploying academic support resources as studies of similar embedded tutoring models have indicated a much heavier utilization of the embedded tutors and a more significant positive impact on students' academic outcomes. The institution that was the target of this research may have been more effective if there had been some guidance for the instructors and tutors as to the best practices for such a model and had implemented the CGECs uniformly.

College-Readiness is an Accurate Success Predictor in CGECs

The results of this study further solidify the already substantial body of research that indicates that college readiness testing does have a place in the college admission process in that the college readiness designation was a strong predictor of a student's

performance in their gateway English class (College Board, 2017; Cui & Bay, 2017). The test that was used to diagnose a student's college readiness was designed specifically for the historic developmental gateway course pipeline, and the institution that was the target of this research was utilizing the test in such a manner as other institutions in the state likely would be. Despite that fact and the other criticisms regarding college readiness discussed in Chapter II, the quantitative and qualitative analysis conducted for this study suggests that there was a stronger connection between college readiness and successful academic outcomes in CGECs versus embedded tutor presence.

Given that the state of Texas just passed a law mandating that most developmental classes had to be offered in some co-requisite form (Smith 2017) and the THECB recently implemented an updated version of the state college placement exam (TSIA 2.0), it would make sense for the diagnostic college readiness exams to be continually updated for this newly standardized course model. In addition, the leadership of institutions need to make sure that they are working with their faculty, testing and advising staff to accommodate how students are being tested, placed, planned, and registered for these course models in such a way that is going to further enhance the gains that have already been made in accelerating students through the learning pipeline. Several of these factors that were highlighted by this research include working to ensure that the same faculty member is assigned to corequisite sections of classes, making the use of specialized academic support mandatory for at-risk students, and offering clear guidance to faculty and/or staff members on what the best practices are for uniquely deployed academic support resources.

Strategic Deployment of Academic Support Resources

Given that the embedded tutoring model that was the focus of this study involved professional tutors attending the instruction hours of ENGL 1301 classes, the campus

writing center of the college likely invested at least a significant portion of its budget for that effort. The instructor and student responses from the qualitative portion of the study indicated that, despite efforts made by the instructor to include the tutors in the class experience, the students did not utilize the embedded writing tutors present in their classes. This point is further borne out by the quantitative data analysis. The lone exception to this was Student 9, who indicated heavy utilization of the embedded tutor during their class time and at the tutoring center outside of class hours. While this was an isolated circumstance, it could be inferred that Student 9 may not have shared the same positive learning experience they indicated with their responses without the embed tutor present.

These circumstances could be replicated in a more strategic manner that honors the needs of individual students, the limited financial resources of academic support outlets, and the time tutors can allot to working with their students. Such a system would require a watchful eye of course instructors, a willing or mandated student participant, and a tutor with a flexible scheduling system. While these circumstances might not always align perfectly, they would likely result in more measurable successful academic outcomes for the students that could be referred through this system. Several trackable and enforceable standards could be put into place to standardize such a system including a student's college readiness status/placement in a corequisite section, earning poor grades on high-value benchmark assignments throughout the semester, or having to attend a certain amount of tutoring over a semester. These elements were successful at other institutions deploying CGECs like the one that was studied and have the potential to do the same for the institute that was studied for this research.

Conclusion

The purpose of this mixed-methods study was to examine the effectiveness of embedded writing tutoring in corequisite gateway English classes. The influences between tutor class presence and college readiness on students' academic and course outcomes in CGECs were investigated through various quantitative analysis, and qualitative research was conducted on data gathered from interviews with instructors that taught CGECS and students that participated in various iterations of the class. The data were collected from a community college on the suburban outskirts of a major Texas city from fall 2017 through spring 2019, excluding summers. The findings of the study indicated that, despite the CGEC course model being successful in helping non-college ready students attain their English credits faster, embedded tutoring did not play a significant role in supporting or enhancing that success due to the students not utilizing the tutors during class time.

Chapter I discussed the rationale and need for the study, primarily focusing on the need for updates to historic developmental course models to get non-college-ready students to earn their initial credits faster for schools better to retain them until graduation (Tinto, 2012). Chapter II analyzed the previous findings of studies that predominately successfully implemented corequisite course models and the various types of academic support that were used to support the success of those models. Chapters III and IV detailed the methods that were used to collect and analyze the data that were gathered for this study which found statistically significant connections between tutor class presence and college readiness status to students' academic and course outcomes.

Finally, Chapter V communicated the researcher's findings that the quantitative and qualitative data analysis proved the much stronger predictor was student college readiness. Instructor and student interview data confirmed that students rarely used

writing tutoring resources, whether in class or at the writing center, but that the CGEC model that was deployed at the target research institution was having the desired effect of accelerating developmental student credit acquisition, despite embedded tutoring not having a significant impact.

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APPENDIX A:
TSIA PLACEMENT CHART

Writing Course	TSI	CSA Exit Test	Previous Coursework	ACT/SAT	TAKS	STAAR
College Success Academy	310 – 339 or TSI Essay of 1 and ABE 1 –4	N/A	N/A	TSI Score Required for Placement	TSI Score Required for Placement	TSI Score Required for Placement
IRW 0320	340-349 and Essay of 2 or 3 OR ABE 5-6	80% CSA Writing and Essay 3+	ENGL 0330	TSI Score Required for Placement	TSI Score Required for Placement	TSI Score Required for Placement
College Ready: Writing Any course requiring TSI completion in Writing	340 and Essay of 4 OR Less than 340, and ABE at least 4, and Essay of 5	95% CSA Reading and Essay 5+	ENGL 0360	ACT English 19 and Comp. 23 or SAT Evidence Based Reading and Writing (EBRW) 480	Exit-Level ELA 2200+ Essay 3+	Level 2 score of 4000 on English III
Reading Course	TSI	CSA Exit Test	Previous Coursework	ACT/SAT	TAKS	STAAR
College Success Academy	310 – 341 and ABE 1-4	N/A	N/A	TSI Score Required for Placement	TSI Score Required for Placement	TSI Score Required for Placement
IRW 0320	342 – 350 OR ABE 5 or 6	80% CSA Reading	READ 0340	TSI Score Required for Placement	TSI Score Required for Placement	TSI Score Required for Placement
College Ready: Reading Any course requiring TSI completion in Reading	351+ OR Co-Requisite IRW-320	95% CSA Reading	READ 0370	ACT English 19 and Comp. 23 OR SAT Evidence Based Reading and Writing (EBRW) 480	Exit-Level ELA 2200+ Essay 3+	Level 2 score of 4000 on English III

APPENDIX B:

FACULTY INTERVIEW CONSENT AGREEMENT

Informed Consent to Participate in Research

You are being asked to participate in the research project described below. Your participation in this study is entirely voluntary, and you may refuse to participate, or you may decide to stop your participation at any time. Should you refuse to participate in the study or withdraw your consent and cease participation in the study, your decision will involve no penalty or loss of benefits to which you may be otherwise entitled. You are being asked to read the information below carefully and ask questions about anything you do not understand before deciding whether to participate.

Title: Investigating the Academic Impact of Embedded Tutoring on Corequisite Gateway English Courses

Principal Investigator(s): Blaine Ganter, M.Ed.

PURPOSE OF THE STUDY

This research aims to understand the impact of embedded tutoring in corequisite gateway English courses on student academic achievement.

PROCEDURES

Study participation will involve an informal interview that will be conducted over Microsoft Teams for about forty-five minutes.

EXPECTED DURATION

The total anticipated time commitment will be approximately forty-five minutes.

RISKS OF PARTICIPATION

There are no anticipated risks associated with participation in this project.

BENEFITS TO THE SUBJECT

You will receive a \$15 Starbucks gift card as a token of appreciation for your participation, and your participation will help the investigator better understand the impact of embedded tutoring in corequisite gateway English courses on student academic achievement.

CONFIDENTIALITY OF RECORDS

Every effort will be made to maintain the confidentiality of your study records. The data collected from the study will be used for educational purposes. However, you will not be

identified by name. For federal audit purposes, the participant's documentation for this research project will be maintained and safeguarded by the principal investigator for a minimum of five years after completion of the study. After that time, the participant's documentation may be destroyed.

FINANCIAL COMPENSATION

There is no financial compensation to be offered for participation in the study.

INVESTIGATOR'S RIGHT TO WITHDRAW PARTICIPANT

The investigator has the right to withdraw you from this study at any time.

CONTACT INFORMATION FOR QUESTIONS OR PROBLEMS

The investigator has offered to answer all your questions. If you have additional questions during this study about the research or any related problem, you may contact the Principal Investigator, Blaine Ganter, M.Ed.

CONSENT TO PARTICIPATE

The researcher will present and discuss this document with research participants before they participate in the interview. Should you not want to move forward with the research, the researcher will offer you the chance to leave the Microsoft Teams meeting with no penalty. Should you remain on the Teams call, you consent to your participation in this research.

APPENDIX C:
INSTRUCTOR INTERVIEW QUESTIONS

1. Please, tell me your thoughts about gateway English courses.
2. Can you tell me about the gateway English course model used at your college?
3. Can you describe the initial preparation and deployment of the model?
4. Can you describe to me what kind of section/s of the course you have taught?
5. Are there any similarities or differences in how you approach teaching the corequisite sections versus the stand-alone sections? If there are, what are they?
6. In sections where an embedded tutor was available, what kind of role did the tutor play in your section/s?
7. In sections where an embedded writing tutor was available, have you included them during in-class activities? If yes, how so?
8. Did embedded tutors have an impact on your students' academic performance? Yes/no. If so, how? If not, why not?
9. Did the corequisite model impact student learning outcomes and/or academic achievement? Yes/no. If so, how? If not, why not?
10. Is there anything else you would like to tell me about?

APPENDIX D:

STUDENT INTERVIEW CONSENT AGREEMENT

Informed Consent to Participate in Research

You are being asked to participate in the research project described below. Your participation in this study is entirely voluntary, and you may refuse to participate, or you may decide to stop your participation at any time. Should you refuse to participate in the study or withdraw your consent and cease participation in the study, your decision will involve no penalty or loss of benefits to which you may be otherwise entitled. You are being asked to read the information below carefully and ask questions about anything you do not understand before deciding whether to participate.

Title: Investigating the Academic Impact of Embedded Tutoring on Corequisite Gateway English Courses

Principal Investigator(s): Blaine Ganter, M.Ed.

PURPOSE OF THE STUDY

This research aims to understand the impact of embedded tutoring in corequisite gateway English courses on student academic achievement.

PROCEDURES

Study participation will involve participation in an informal focus group conducted over the phone for twenty minutes.

EXPECTED DURATION

The total anticipated time commitment will be approximately twenty minutes.

RISKS OF PARTICIPATION

There are no anticipated risks associated with participation in this project.

BENEFITS TO THE SUBJECT

You will receive a \$15 Starbucks gift card as a token of appreciation for your participation, and your participation will help the investigator better understand the impact of embedded tutoring in corequisite gateway English courses on student academic achievement.

CONFIDENTIALITY OF RECORDS

Every effort will be made to maintain the confidentiality of your study records. The data collected from the study will be used for educational purposes. However, you will not be identified by name. For federal audit purposes, the participant's documentation for this research project will be maintained and safeguarded by the principal investigator for a minimum

of five years after completion of the study. After that time, the participant's documentation may be destroyed.

FINANCIAL COMPENSATION

There is no financial compensation to be offered for participation in the study.

INVESTIGATOR'S RIGHT TO WITHDRAW PARTICIPANT

The investigator has the right to withdraw you from this study at any time.

CONTACT INFORMATION FOR QUESTIONS OR PROBLEMS

The investigator has offered to answer all your questions. If you have additional questions during this study about the research or any related problem, you may contact the Principal Investigator, Blaine Ganter, M.Ed.

CONSENT TO PARTICIPATE

The researcher will present and discuss this document with the research participant before they participate in the interview. Should you not want to move forward with the research, the researcher will offer you the chance to leave the phone call with no penalty. Should you remain on the phone call, you consent to your participation in this research.

APPENDIX E:

STUDENT INTERVIEW QUESTIONS (TUTOR PRESENT)

1. Overall, how did you feel about your ENGL 1301 section?
2. How well do you feel ENGL 1301 prepared you for writing in the future?
3. Did you have any challenges when completing ENGL 1301? Yes/no. If so, what? If not, why not?
4. Did you notice any change in your writing during the class?
5. Was there anything about ENGL 1301 that you appreciated?
6. Was there anything you would want to change about the experience of ENGL 1301?
7. Was it helpful having a writing tutor in ENGL 1301? If so, why? If not, why not?
8. What types of activities did you do with the tutor in ENGL 1301?
9. If you did work with a tutor, how much was that?
10. Did you have a preference for working with the tutor or the instructor in ENGL 1301? If so, why? If not, why not?
11. Did you ever pursue writing tutoring outside of ENGL 1301? If so, why? If not, why not?
12. Before we end this focus group, is there anything that you would like to add?

APPENDIX F:

STUDENT INTERVIEW QUESTIONS (TUTOR NOT PRESENT)

1. Overall, how did you feel about your ENGL 1301 section?
2. How well do you feel ENGL 1301 prepared you for writing in the future?
3. Did you have any challenges when completing ENGL 1301? Yes/no. If so, what? If not, why not?
4. Did you notice any change in your writing during the class?
5. Was there anything about ENGL 1301 that you appreciated?
6. Was there anything you would want to change about the experience of ENGL 1301?
7. Did you ever hear about the Writing Center and tutoring services that are available to you in ENGL 1301? If so, what did you hear/know about it?
8. Did you ever use writing tutoring services for ENGL 1301? If so, what were your thoughts about it?
9. If you did not use writing tutoring services for ENGL 1301, why not?
10. Before we end, is there anything that you would like to add?