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EXAMINING THE BENEFITS OF A FACULTY-RUN READING AND WRITING  
LAB AT A SMALL, PRIVATE UNIVERSITY IN THE MIDWEST

A dissertation submitted in partial fulfillment  
of the requirements for the degree of

DOCTOR OF PHILOSOPHY

to the faculty of the

DEPARTMENT OF EDUCATION SPECIALTIES

of

THE SCHOOL OF EDUCATION

at

ST. JOHN'S UNIVERSITY

New York

by

Dolores Greenawalt

Date Submitted: March 1, 2021

Date Approved: May 19, 2021

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Dolores Greenawalt

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Dr. Kyle Cook

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## **ABSTRACT**

### **EXAMINING THE BENEFITS OF A FACULTY-RUN READING AND WRITING LAB AT A SMALL, PRIVATE UNIVERSITY IN THE MIDWEST**

Dolores Greenawalt

This study examined if a faculty-run Reading and Writing Lab at a small, private university in the Midwest helped traditionally underserved college freshmen taking developmental English classes increase their levels of self-perceived comprehension and confidence. Students who typically need to take developmental English classes include English as a Second Language (ESL) students, English Language Learners (ELL), immigrants, and first-generation students. Many of these students enter college and face economic and social disparity and may need more support than other students. This mixed methods study examined data from two surveys given to students taking the developmental English class. It also examined interviews with low, medium, and high users of the Reading and Writing Lab. A paired samples t-test analyzed the results from survey one and survey two that measured student confidence and self-perceived comprehension. Finally, a thematic analysis drew out themes from the interviews. Using a convergent mixed-methods design, the responses from the interviews and the results of the surveys gathered evidence to help understand the benefits of the Reading & Writing Lab. Research like this found the benefits of having a faculty led Reading and Writing Lab on a campus. Providing this service to help traditionally underserved students on campus was found to increase the confidence of these students and build relationships that helped them feel welcome and feel successful in class.

## **DEDICATION**

This dissertation was completed during a pandemic. I want to remind myself in years to come that for the last year of it my family was home with me. Every. Single. Day. For nine months as I was finishing this portion. We cried together, laughed together, yelled together, learned from each other, and most of all loved each other. My children's resilience during virtual schooling created a fire in me to complete this on-time. Their unrelenting positive attitude as the world changed around them in ways we are still trying to digest motivated me to do the same. When I told them in exasperation and exhaustion I was going to quit and wait a year, they doubled down with "if we can do it, you can too" and they helped even more. My husband, Brian, continued to support me even though he had no separation between work and home. During his workday, he created lunches, tried yoga with Miho, danced with his cube mate, and helped with all the mundane tasks around the house as I locked myself in our bedroom to write and research. My mom and dad, after we could see them, would come over and take care of our kids as I wrote and did more research. My neighbors rallied behind me and listened to questions, gave me a room to write when my children would find me in my house, and supplied me an endless supply of Fruit by the Foot. Together, this team helped me finish this project. My friend Becky saved the day with last minute recommendations and help. I am grateful and thankful for everyone who has helped me. I hope my kids remember this so when they feel like they can't go any further, they grab themselves a fruit snack and march forward.

## ACKNOWLEDGEMENTS

Throughout the course of this dissertation, I have been aided by so many people “behind the scenes.” First, my committee: Dr. Kyle Cook, Dr. Michael Sampson, and Dr. Clare Irwin. Their feedback was essential to my understanding of how to create this piece of published work. Their guidance and positive reinforcements helped keep me in check and helped guide me along, especially Dr. Cook’s kind reminders about my coursework in statistics kept me going throughout my quantitative research. My hope is that all those who choose this path have a strong committee behind them so they can also feel the love (insert Lion King theme song). I would also like to acknowledge the staff at Carroll University, especially Allison Reeves Grabowski and Dr. Tim Galow. Allison’s unrelenting positive attitude as I would sink into her chair and make faces (like my children) kept me going when I didn’t think I could anymore. Tim’s encouraging demeanor and reminder I need to do this to get on with my life helped encourage me on days when I was just so exhausted. Lastly, I want to acknowledge my students who didn’t know why it was so important for me to finish but made sure they were there to help me. My lab was a sanctuary not only for them; but, also for me, as we bounced ideas off each other and leaned on each other when we thought we couldn’t do it anymore. They worked so hard, especially through the difficulties and uncertainty that COVID brought upon us, and they shine even brighter than before.

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## CHAPTER 1: INTRODUCTION

According to the National Center for Education Statistics, 11% of entering college freshmen take a developmental English class their first year of college (2016).

Developmental English classes provide an intensive review of the English material whose credits may or may not be counted towards a student's major. Of the college freshmen population who takes developmental English classes, most are minorities on campus.

According to the National Center of Education and Statistics (2016) report on Developmental Course Taking in U.S. 2- and 4- year public institutions, 66% of the Black population and 53% of the Hispanic population at 4-year institutions took developmental courses. In comparison, only 36% of White students took developmental courses. Fifty-two percent of students in the lowest income group took developmental courses, while only 33% of those in the highest income group took developmental courses. Students more likely to be in developmental courses are also the students who are more likely to drop out. For example, first-generation college students are four times more likely than their peers to drop out of college (Engle & Tinto, 2008). These populations are important to study because universities must find ways to increase their confidence and comprehension for them to achieve higher grades and more success in the future.

Freshmen who are taking developmental English courses may have a greater need for outside of the classroom help to gain knowledge and confidence in their skills for the remainder of their college career. To aid students in gaining confidence and knowledge, writing centers are commonplace among universities. The National Census of Writing (2017) released the most comprehensive database of its kind surveying over 900 higher

education institutions in 2017. Of the 483 four-year universities that responded to “Does your institution have a writing center or learning center with writing tutors?” 100% answered yes. Writing centers are pivotal institutionalized labs for many universities offering extra help for students with their writing and grammar skills. However, there is limited research on writing labs and no research can be found on combining reading and writing labs at the college level.

The limited research on writing labs points to studies where students were asked if they felt they learned information (Bromley, Northway, and Schonberg, 2016), but there aren’t details on how much information they may have learned, or what kind of information writing labs taught students. Other studies performed quantitative research but measured all incoming freshmen and didn’t focus solely on the population of students who needed to take a developmental English class (Bielinska-Kwapisz, 2015). Some studies only focused on (Bromley, Northway, and Schonberg, 2016) writing labs that were led by peers and not faculty, thus limiting the amount of services a lab can offer. Concurrently, there is also little to no research on how confidence levels increase or stay the same for those students who attend a lab and class concurrently.

While there is research on developmental English classes, the research doesn’t connect them to writing labs. Chambers and colleagues (2010) performed a descriptive study analyzing the efficacy of a writing lab for those in a developmental English class and those who were in a credit-bearing class. This study, along with others, (Chen and Wang, 2018), explored the classroom settings and what students learned, but does not connect the classroom to reading and writing labs.

It is imperative that research looks at developmental English classes and labs, but it is

also necessary to address how freshmen connect to their campuses for maximum success. Tull and colleagues (2014) describe how values for Black and Latino students stem from collectivist cultures that place personal relationships at a higher value than task driven characteristics. They describe how this collectivist culture differs from individualist culture, thus making it more difficult for minority students to succeed. Exposito and Bernheimer (2012) analyze how students of varying backgrounds may be traditionally underserved during their freshmen year and struggle with fitting in at school and finding an inclusive community. Research has shown fitting in can affect confidence in freshmen (Chambers, 2010; Jack, 2019) and have adverse effects to their class participation.

The present study examined the benefits of a faculty run Reading & Writing lab for students' confidence and self-perceived comprehension. It also examined whether the value changed with the frequency of student visits to the lab.

### **Purpose of the Study**

The purpose of the study is to build upon the existing literature by assessing the relationship between participation in a Reading and Writing Lab and a developmental English class by assessing the levels of self-perceived comprehension and confidence of college freshmen. This study used a convergent mixed methods study designed to triangulate data from a small, private, university in the Midwest. Creswell (2015) points out that the convergent design collects quantitative and qualitative data and then merges the results to analyze the data. The study examined if students were more confident from participating in a faculty-run reading and writing lab concurrent to a developmental English class through collecting quantitative data collected through survey's and qualitative data in lab user interviews. The intent was to learn more about students' self-

perceived comprehension and confidence and to determine if attending the lab increased them.

### **Significance/Importance of the Study**

The Reading and Writing Lab is a service where students can learn how to refine textbook reading skills and note taking and to increase their knowledge of rubrics and assignment comprehension. Students can also be part of group study sessions, collaborate with peers, and work on group assignments in the Reading and Writing Lab. Without proper research, it is hard to assess the benefits of a combined Reading and Writing Lab and its influence on students' comprehension and confidence. The present study fills in gaps from other studies where the focus is either on the classroom or the lab (Bielinska-Kwapisz, 2015; Bromley, Northway, and Schonberg, 2016; Chambers, et al., 2010; Exposito & Bernheimer, 2012; Jack, 2019). By introducing a lab that works with the class, the goal is for students to increase their exposure to reading and writing and provide them with extra help that can increase their education and their confidence.

The current study focused on addressing these gaps in the literature. In a period where college admissions are closely monitored, universities need to ensure they offer all the services they can to help students of different backgrounds. For many universities, these services may be a deciding factor in the university students choose to attend.

### **Research Questions**

The purpose of the study was to use a convergent mixed methods approach to analyze how participation in the Reading and Writing Lab benefits students' levels of self-perceived comprehension and confidence.

### ***Primary Research Question***

What makes the Reading and Writing Lab useful and effective when attending concurrently with a developmental English class?

### ***Quantitative***

**Research Question 1.** Does attending a Reading and Writing Lab concurrently with a developmental English class increase a student's confidence from the beginning of the semester to the end of the semester?

**Research Question 2.** Does attending a Reading and Writing Lab concurrently with a developmental English class increase a student's self-perceived comprehension from the beginning of the semester to the end of the semester?

### ***Qualitative***

**Research Question 3.** How, if at all, does the Reading and Writing Lab help increase a student's confidence?

**Research Question 4.** How, if at all, does the Reading and Writing Lab help increase a student's self-perceived comprehension?

### **Definitions of Terms**

#### ***Faculty-Led Reading and Writing Lab***

A service where students can access faculty on a university campus for help with their writing assignments, textbook reading comprehension, academic journals, rubrics and assignments. The lab operates in person where a student can talk to a professor face to face. There is also a virtual option where students meet with the faculty online through Teams.

### ***Developmental English Class***

A class that provides an intensive review of the basic English skills. Students either self-select or are advised to take the class based on their high school English grades and ACT or SAT. It is only offered during the Fall semester. The class may or may not be counted towards a student's major.

### ***Traditionally Underserved***

Students who do not fall under the traditional population because they either speak multiple languages, are immigrants, first-generation, or part of a community that does not traditionally attend college.

### ***English as a Second Language (ESL)***

Student who learns English after learning another language whether it be through home or school.

### ***English Language Learner (ELL)***

Student who learns English concurrently to another language whether it be through home or school.

### **Positionality**

As both a researcher, instructor, and facilitator of the lab, I saw many of the lab users in multiple settings; because I recognize that I am in a position of power, it was crucial that I make sure all my students understood that participation in the study (or lack of participation in the study) did not affect their grades in any way. The informed consent informed participants that their participation or refusal to participate was not factored into the students' grades, and did not affect their course grades at all, and confirmed that they were not required to participate in the study.



## CHAPTER 2: REVIEW OF RELATED RESEARCH

Writing labs are important for students who need extra help on their writing assignments or help reviewing basic information. However, a reading and writing lab facilitated by faculty that can teach writing basics, but also help students with their reading comprehension may help students further enrich their knowledge, comprehension, and confidence. The students can connect what they learn in their developmental English class to the information they learn in the Reading and Writing Lab. Increasing their knowledge can also increase their confidence and can lead to higher grades.

Having a faculty-led reading and writing lab is important for a campus because the service offers students extra help. However, there is a large gap in the literature on adult learning and writing centers. Many researchers argue that it is difficult to see if writing centers help students, because the research is scarce, and there are many other variables when studying what students find successful (Bielinska-Kwapisz, 2015; Bromley, Northway, and Schonberg, 2016; Chambers 2010;). Lerner (2001) researched how difficult it is to find studies in assessing writing centers. There is still limited information on them, and it's difficult to discern if the information that is provided is connected. The gaps in the literature present an opportunity to bridge together the unique strengths of both qualitative and quantitative research through a convergent mixed-methods research design. The following literature review represents the limited studies at the university level that are available on developmental English classes, writing labs, and how confidence plays an important role for a freshmen college student.

## **Writing Labs**

Bromley, Northway, and Schonberg (2016) performed a cross-institutional mixed-methods study examining students' perceptions of writing centers across three higher education institutions. A total of 37 self-selected participants attended two to four one-hour long focus groups at the three institutions. The purpose of the study was to examine if students' felt they could transfer skills learned from the writing lab to other classes. Eighty percent of the sample of students who attended the focus groups said they did believe they could transfer information to other classes. The study did not define what information students' felt they took from the labs to the classrooms. Additionally, there is no quantifiable data on how much of the information was transferrable. While there was a large increase in students' self-reported confidence, the study lacks quantifiable data to support ample evidence the information students learned was helpful.

In 2015, Bielinska-Kwapisz performed a quantitative study that followed 315 first-year freshmen seminar students and their experiences at the university's writing lab. The writing lab was used to help with major writing assignments. Overall, 30% of the sample visited the writing center and from those that visited, there was an overall grade increase of 9%. Bielinska-Kwapisz (2015) considered high GPAs as intrinsic measures and a motivating factor in students attending writing labs. Additionally, other measures that helped students attend writing labs included professors who were persuasive in showing the benefits of attending a writing lab.

Interestingly, researchers found those who visited the lab were more connected to university life and the campus. Students who participated in different activities such as the writing center collected "UnivPoints," which signified what they attended on campus,

creating a community of those with points. The study followed all first-year freshmen but did not distinguish between populations of students. There was no way to measure if traditionally underserved populations attended the lab more or less, thus leaving a gap in the research. Because the research did not define different student populations, it was difficult to see if the lab served and benefited traditionally underserved students.

In their study that was centered around three university writing centers, Bromley, Northway, and Schonberg (2016) reported that all three writing institutions they studied were staffed by peer or graduate students, which is indicative of most literature presented on writing labs. The National Census of Writing (2015) reported only 38% of writing centers employ faculty writing consultants in four-year institutions and 65% of two-year institutions employ faculty writing consultants. The survey did not clarify if these faculty writing consultants led student tutors, or if they were tutors of the lab. Additionally, while writing centers are a popular staple on university campuses, reading labs are either non-existent or not defined for most universities.

### **Developmental English Classes**

Research has shown that students who take developmental English classes or non-credit English classes find their confidence is lower than students who are admitted to traditional English classes (Chambers and colleagues, 2010). Additionally, students may not have a positive outlook on their education when they are not presented with extra help and this outlook can lead to lower levels of information (Chen and Wang, 2018). Chambers and colleagues performed a descriptive study comparing differences in self-efficacy of college freshmen who are taking developmental reading courses and credit-bearing English courses (2010). The study followed 100 students, 59 of whom were in

developmental reading courses and 41 who were in credit-bearing English freshmen courses. A self-efficacy survey was administered to students that assessed confidence related to specific reading-related items, which found that students in developmental reading courses exhibited lower-levels of self-efficacy confidence related to academic reading than those in credit-bearing courses (Chambers and colleagues, 2010). With a higher population of minority students in developmental English classes, this lack of confidence can lead to higher drop-out rates for minority students. The National Student Clearinghouse Research Center found that college students who are Black have an 11.8% higher dropout rate than college students who are White, with a total of 36.7% of Black students dropping out after the first year. Further, college students who are Hispanic have a 6.2% higher rate than college students who are White with a total of 31.1% dropping out in four-year, private universities after their freshmen year.

Services where students may increase their confidence and comprehension are important because they give students a greater chance of learning and understanding new information. Chen and Wang (2018) found that more attention and services for students can increase the positive outlook in class. Their research included a multimodal framework of learning analytics (MFLA) study in Taiwan, which compared 70 students' vocabulary and reading skills over the length of two academic semesters. There were two classes, with class 1 being the experimental class. The information class 1 learned was the same as class 2, however it was presented differently. In Class 1, the experimental group, had additional help through substantive interactive methods such as programs and additional information about their readings, while class 2 had traditional teaching methods without the use of electronic material. The electronic material available to the

class 1 explained details about stories including plots, tone, facial expressions, body language and more.

Additionally, class 1 wrote concept maps, or Cmaps, answering questions such as “How have I helped my classmates?” Students were positive about the Cmaps, expressing they were able to get their point across more, the teacher could adjust their learning as they read the Cmaps, and they learned more vocabulary and reading. They were tested at the beginning of the semester, halfway through the semester, and at the end of the semester. Using descriptive studies, they reported a 26% increase in reading ability for Class 1, demonstrating that the more ways the information was processed, the more students learned.

Chambers and colleagues (2010) and Chen and Wang (2018) highlighted the importance of having extra services for traditionally underserved students. Chambers and colleagues’ research demonstrated that students’ who were enrolled in credit bearing classes had a higher confidence level than those in developmental classes. Chen and Wang (2018) provided data that showed that extra services may increase confidence and comprehension. Disproportionately, traditionally underserved populations that take developmental courses (National Center of Education and Statistics, 2016) may benefit from a Reading and Writing Lab.

### **Relationships and Building Community**

For traditionally underserved populations, it is critical for them to feel like they belong. Strayhorn (2012) pointed that out a sense of belonging is one of the most basic human needs. For many collectivist cultures, such as Black and Hispanic students, they may feel excluded because they are the minority population on campus. Coupled with

developmental classes, it is vital to connect the traditionally underserved populations to campus. Reading and Writing labs can create an inclusive community where students feel a sense of belonging and can get together and learn from each other.

Exposito and Bernheimer (2012) noted many students who may be first-generation students, immigrants, or speak a different first language than English, may come from backgrounds where their social networks are tied closely to family, language, and cultural communities. After entering college, they become a minority and do not have a connection to the campus. Many college students face economic and social disparity. College freshmen who may not be part of the homogenous group on campus may lack the skills and confidence needed to do well in their developmental English class and move forward to other classes after their freshman year.

Existing research discusses the importance of other factors that lead to success during the freshmen year of college. Umbach and Wawrzynski (2003) discuss the positive impact of instructor - student relationships. Additionally, Chambers Cantrell, Correll, Clouse, Creech, Bridges, & Owens (2010) research the importance of confidence in college freshmen. Jack (2019) interviewed disadvantaged students highlighting the difficulties they face entering college and how many feel like they fail from the beginning. Students who may experience any of the above, can develop and work on these skills in a faculty-run Reading and Writing Lab.

Many students who drop-out of college report feeling like they are failing from the beginning. Jack (2019) discusses interviews with traditionally underserved students and the idea that they walk onto campus with social and economic constraints that add to the lens of vastly different experiences between them and students who have come from a

more traditional route. These differences can add on to feelings of social disparity from the beginning of their career in college making students feel more removed from the college community and less connected and making it easier to break off and drop out.

Inclusive community for traditionally underserved students and students who enter college with skills that are not as strong as many of their peers are essential to decrease the immense pressure students feel for perfection upon admission. Orem (2018) discussed psychological factors may face when attending college and how it's important to understand perfection is not always a reality. Creating an environment that does not have the high stakes pressure of a classroom is important for helping students understand that they can learn without always seeking perfection. This increase can lead to higher success because they belong at their institution of learning.

Student-faculty relationships, like the ones found in faculty led labs, are critical for helping students achieve high levels of success, especially in traditionally underserved student populations. Komorraj, Musulkin, and Bhattacharya (2010) found that those students who participate in conversations with faculty feel a greater sense of belonging and increase their confidence levels. Umbach and Wawrzynski (2003) report that students in their first and senior year who frequently interacted with the instructors reported greater gains and were connected more socially and developmentally in their schoolwork and had a greater knowledge of general education. Tinto (1993) and Astin (1993) suggest that the more the students were connected to college experiences and groups, the greater success students found in their studies and overall college experience. However, many traditionally underserved college students find themselves disengaged and do not attend or participate in college experiences like traditional students.

## **Student-Led Success**

Student success can be attributed to the motivation of the student. Students self-perceptions (Cox, 2001) plays an important factor in their success in classes. For many students, the crippling fear of failing or fear of judgement in the classroom can lead to quiet behavior and a lack of success in the classroom. Reading and Writing Labs can lead to higher student success as students feel more confident in the work they are completing. Bickerstaff, Barragan, and Rucks-Ahidiana (2017) studied data from 97 semi-structured interviews to describe students' confidence levels upon entering college and how they evolved as the semesters progressed. Researchers found a common ground among students. The more they felt they learned, the higher their confidence was. In interviews, respondents commented that learning to care about school, and learning what they needed to work on were important factors in helping them take control of their academic success. This success came from learning new techniques to help themselves, learning to care about their educational experience and learning, and a shifting awareness of what they wanted to gain from school. Students' ability to time manage was an important factor in creating success and increasing confidence. These student structured activities took time to learn. It also took students time to understand which techniques worked best for them. Students measured their success with higher grades, positive remarks from an instructor, and more confidence in themselves.

Gorga-Cukras (2006) analyzed data on nineteen students over a thirteen-week period at the Bronx Community College. The investigator studied the success rate of students compared to one of the four study analyses they chose. The strategies they could choose from included: encoding, organizing, monitoring, and employing a study plan.



The investigator found monitoring (or re-reading and self-testing) and employing a study plan (focusing on what to study before a test) were consistently related to the highest test scores. Further, students who took the most direct study plans were the most successful students in class.

This study showed the positive effect students can have on themselves when they take their education in their hands. Influenced by their personal style, students can learn what works for them by using these strategies can lead them to higher comprehension in class. Additionally, students who learn how to use these techniques in one class can employ them in other classes and use them to their benefit.

### **Theoretical Framework**

Lee Vygotsky's sociocultural theory (1962) and Malcolm Knowles' andragogy theories (1975) are critical to understanding adult learners. Under the education paradigm, where the focus is centered around students, both theories focus on the idea that a student's background and the way a student learns help construct knowledge and support diverse methods of instruction. The American Psychological Presidential Task Force on Psychology in Education (1997) believes that this context helps increase the potential a student can learn. Within this paradigm, two very important theories that focus on background, culture, and the way adult learners learn focus can create an environment where the learning potential increases. Without an understanding of either theory, it can be difficult to understand the knowledge a student brings to class and how students of various cultures can interpret the same material.

### ***Sociocultural Theory***

In 1962, Lee Vygotsky, a psychologist, posited that we learn through our social

interactions with others. He further examined the role that instructors have with students and how these social interactions can create communities where students can learn the most because they are taught in a manner that can help maximize their learning potential. Vygotsky (1962) recognized that learning is always occurring, and the social context is equally as important as the specific pedagogy that is occurring. By working with students and understanding what motivates and interests them, Reading and Writing Labs can maximize the amount of learning that happens. Vygotsky's belief that meaningful exchange is a daily occurrence means students can also create habits that will maximize their learning potential. When students understand the role, they play in learning new information, they become their most powerful ally.

Understanding the importance a person plays in his/her own experience is equally validating as it is important to understanding how one learns. If a student can identify what motivates them, the Reading and Writing Lab can help increase their motivation by using techniques that work with the student. Additionally, by using their cultural background as positive experiences that students can dig deep into, they will find they know the answer more than not. This means students can grow and learn from their experiences, as opposed to being limited by their background. This encouraging thought is positive and motivational and allows adult learners to be in more control of their studies.

### ***Andragogy Theory***

Andragogy, or self-directed learning (SDL) was pioneered by Malcolm Knowles theory of adult learning in the 1970s. Andragogy requires students to be able to understand their learning needs, implement a learning plan, and learn how to control their

learning environment. Knowles, Holton III, and Swanson (2015) stated that this is different from the pedagogical model. In a pedagogical model, the teacher decides what needs to be learned and requires the student to learn it through various forms of pedagogy. However, andragogy is based on several assumptions by Knowles as written in Knowles, Holton III, and Swanson (2015) included the need to know, the learner's self-concept, a readiness to learn, orientation to learn, and finally motivation. These goals are important for students to work on bettering themselves. Adult learners need to be motivated to change and grow, because unlike elementary grades, their participation in school is voluntary and they can drop out at any point. When students develop a drive to learn, they encounter more positive experiences that will lead them to successful results such as good grades and higher confidence skills.

The theory of andragogy does not exclude directions from teachers, rather it changes the role of an instructor to more of a facilitator. This is evident in my area of study in the Reading and Writing Lab. In the Reading and Writing Lab, students are expected to take ownership for their work and create a timeline for their assignments. Additionally, they learn the importance of collaboration and useful techniques they can carry into the workforce after they graduate. The readiness behind ownership and collaboration can create a motivation to succeed in their education goals. The andragogy theory is based on the idea that adult learners need to know why and what they are doing and that they are not submissive learners like children under a pedagogical model. Adult theories like these have been influential in writing labs throughout history.

## **Relationships Between Prior Research and Present Study**

There are a lot of limitations on past research. Studies are few and varied and the ideas behind theories are what's studied. It can be difficult to lead to writing centers, especially those ran by faculty because most of the writing centers are faculty-led but operated by peers. Students will be able to access faculty with ease and ask questions they may have on their assignments with confidence. This study will help fill in a gap in the literature on the value of having a faculty-run lab and why it creates a more streamlined service for students.

## **CHAPTER 3: METHOD**

### **Research Design**

A convergent mixed methods design was used for this study. A convergent mixed methods design is when a researcher collects quantitative and qualitative data concurrently and analyzes it equally and then interprets the results together (Creswell, 2015). Compared with only quantitative or qualitative research designs, the convergent mixed methods design can more accurately reflect the results of a study. However, in some ways this was an explanatory mixed method design, as some parts of the quantitative data were collected in the beginning of the semester, followed by qualitative data and the second set of quantitative data at the end of the semester, with the quantitative data helping to “explain” the qualitative data . However, the quantitative data was interpreted alongside the qualitative making primarily a convergent mixed methods design (Creswell, 2015). The survey design consisted of Likert questions that was given to students the first week of the study and the same survey administered the last week of the study. Semi-structured interviews with students were also administered the last week of the study.

### ***COVID-19 Pandemic***

With the COVID-19 pandemic underway during this study, there was a higher-than-average dropout rate throughout the semester. Students were available to be meet both virtually and in-person throughout the semester as well. This was evident during the collection of data and is referenced below.

## **Research Questions and Hypotheses**

This study used a convergent mixed method approach to analyze how participation in the Reading and Writing Lab benefits students' levels of confidence and self-perceived comprehension. The survey employed closed-ended questions, while the semi-structured interviews consisted of open-ended questions from low, medium, and high users of the Reading and Writing Lab.

### ***Primary Research Question***

What makes the Reading and Writing Lab useful and effective when attending concurrently with a developmental English class?

The following sub-questions were developed from the primary research question:

### ***Quantitative***

**Research Question 1.** Does attending a Reading and Writing Lab concurrently with a developmental English class increase a student's confidence from the beginning of the semester to the end of the semester? It was hypothesized that students who attended the lab in addition to the developmental English class would self-report a higher confidence on the post survey at the end of the semester.

**Research Question 2.** Does attending a Reading and Writing Lab concurrently to a developmental English class increase a student's self-perceived comprehension from the beginning of the semester to the end of the semester)? It was hypothesized that students who attended the lab in addition to the developmental English class would self-report a higher self-perceived comprehension on the post survey at the end of the semester.

## *Qualitative*

**Research Question 3.** How, if at all, does the Reading and Writing Lab help increase a student's confidence?

**Research Question 4.** How, if at all, does the Reading and Writing Lab help increase a student's self-perceived comprehension?

## **Participants**

This study took place at a less than 5,000 student sized 4-year university in the Midwestern part of the United States in Fall 2020. Following approval from the university and the institutional review board (see Appendix A), participants were recruited from four developmental English classes during Fall 2020. This Instructors teaching the developmental English courses sent out a solicitation email. All students taking the developmental English class in the fall of 2020 were sent the survey to voluntarily participate in the study during the first week of the semester. Students who were enrolled in the developmental English class also had the ability to fill out the consent form and survey on the first time they attended the lab, giving their approval for the study. Confidentiality was explained, and they were notified they could leave the study at any point (see Appendix B).

These first-year college freshmen ranged from ages 18-20 and included traditional and traditionally underserved such as ESL, ELL, first-generation, or from economically-disadvantaged neighborhoods. The study ran for eight weeks during the Fall 2020 semester. It began September 21 and ran through November 17th. Participants could voluntarily attend the Reading and Writing Lab weekly or multiple times a week for the entirety of the study but were not required to attend the lab to be in the study. Students

were labelled into four separate categories. Those who attended the lab eight or more times were labelled as high users. Those who were labelled as medium users attended lab between three and seven times throughout the semester. Low users were identified as users who attended the lab between one and two times throughout the semester. Zero users never attended the lab throughout the semester.

All attendants participated in the lab in-person or virtually. The lab was open Monday and Thursdays from 12:00pm-3:00pm and Tuesdays from 11:30-2:30 so they could maximize their time. All participants were active in the lab activities just like all other participants of the Reading and Writing Lab. This consisted of meeting with the professors one-on-one, small groups, and reading sessions. They also received extra help with paper comprehension, note-taking tips, textbook comprehension, and other questions they had. Their names were recorded in an institutional program but were converted to numbers for data analysis to ensure confidentiality. At the end of the semester everyone who participate in the first survey was invited to participate in the second survey. In addition, a subsample of participants was invited to participant in interviews. All data collection was done virtually.

### **Instruments, Procedures & Measures**

In the study, two data collections instruments were employed. The survey administered to participants asked about perceptions of their own reading and writing skills during the first week of the study and the last week of the study. High, medium, and low user participants of the Reading and Writing Lab were interviewed on their confidence and the knowledge they learned in the lab using an interview protocol (see



Appendix C). In addition, I took notes throughout the semester to capture my views of lab users' different habits and routines in the lab.

### ***Survey***

A survey with the consent form embedded in it was administered to all students who were enrolled in the developmental English class (52) in the fall of 2020 during two timeframes, the beginning of the semester and the end of the semester. With a sample size of 52, the goal was to have an 80% (n = 41) survey response. Thirty-nine students responded to the first survey, however due to higher-than-average drop-out rates during COVID-19, 27 of those participants responded to the second survey.

### ***Measures***

The survey was administered using Qualtrics, data was gathered and organized for both pre- and post- test. The survey was divided into two sections. Each section consisted of nine questions. The first section focused on overall confidence. The second section focused on overall self-perceived comprehension. In this paper, the sections will be titled "confidence" and "comprehension." All the survey questions can be found in Appendix A. Participants were asked to rate their skills on a scale from 1 (no understanding or confidence) to 5 (expert or extremely confident).

The first section of the survey that measured the confidence rate at the beginning of the semester had a Cronbach's alpha rating of internal reliability of .72. The survey had nine questions that centered around confidence. These nine questions were the first half of the survey and measured confidence in writing, reading, and understanding different texts. The second survey given at the end of the semester measured confidence using the same items and had a Cronbach's alpha rating of internal reliability of .83.

The second section of the survey measured comprehension and had a Cronbach's alpha reliability of .70. This was the second part of the survey and had nine questions that centered around self-perceived comprehension on writing papers, readings, and understanding different texts. The second survey given at the end of the semester measured comprehension using the same items and had an internal reliability of .84. Both sets of data showed a high Cronbach's alpha score, indicating a high internal reliability of the confidence and comprehension constructs.

### ***Semi-Structured Interviews***

Throughout the semester, 25 students visited the Reading and Writing in addition to the developmental English class. Of those 25, 18 were low users and visited the lab once or twice, three (3) were medium users and visited the lab 3-7 times throughout the semester and four (4) were high users meaning they visited the lab at least eight (8) times. Of the sample that attended the Reading and Writing Lab, nine users were interviewed.

Students who were interviewed were recruited in the lab by the instructor. All participation was voluntary, and all interviews took place virtually using Microsoft Teams at the end of the semester. All the interview questions can be found in Appendix B. The interviews averaged around 20 minutes, with the longest interview being 30 minutes and the shortest interview being 15 minutes. The questions were followed in numerical order and since they were open-ended, they allowed the interview to go more in-depth.

### **Data Analysis**

#### ***Mixed Methods Analysis***

To answer research question one, both quantitative and qualitative results were combined and examined. By understanding the major themes that emerged from the lab with the results from the surveys, I developed an understanding of what makes the lab successful for students. In the interviews, students discussed the activities they performed in the lab and what helped them most. The activities were categorized according to two sections that aligned with the first and second sections of the survey: confidence and self-perceived comprehension. This integration led to a better understanding and more in-depth analysis of how these activities related to rising confidence and self-perceived comprehension levels.

### ***Quantitative Data Analysis***

Survey results were analyzed in SPSS. Using the data, I sorted the responses into different groups: high lab users, medium lab users, and low lab users. These groups indicated how often they attended the lab. Descriptive statistics were conducted on all variables of interest.

To address quantitative research questions one and two, SPSS Statistics 27 was used to analyze data using a paired t-test to analyze the data from the pre- and post-test surveys. The paired t-tests identified the differences in students' confidence and comprehension levels between the beginning of the study and the end of the study.

### ***Qualitative Data Analysis***

To address research questions three and four, nine (9) students who attended the Reading and Writing Lab at least once were interviewed in semi-structured interviews. According to Creswell (2012), analyzing and interpreting data means drawing a conclusion, summarizing it, and explaining results in words. The audio of the interview

was recorded; however, interview answers were kept confidential, and were filed away after participation for one year in a locked cabinet. The data from the interviews were transcribed using inductive coding and a thematic analysis that generated codes, performed data reduction, compiled data, and generated themes (Coffey and Atkinson, 1996) of the interview transcripts. Line by line coding occurred. These codes were eventually compiled into two themes: student-structured activities and lab attendance.

The student-structured activities theme split into two categories. The first category, group activities, was associated with the first section of the survey that was relevant to confidence levels. The second category, individual activities, was associated with the last section of the survey that was relevant to self-perceived comprehension. The student-structured theme helped augment the survey's data and confirm the findings from the quantitative analysis. The activities that students mentioned were grouped into group activities or individual activities.

The group category code included activities such as: small group learning, group writing, and group reading and learning to move from one activity to another. The individual category code included sub-categories such as: quiet writing, quiet reading, and focusing on material. Further breakdowns of included activities they performed in the lab were labelled in Appendix E. Wordles were created to convey which activities students' worked on the most. The more that students mentioned specific activities, the larger the words were in the wordles. These wordles helped reinforce what the different lab users found most useful in increasing their confidence and self-perceived comprehension.

The lab attendance theme was associated with confidence and self-perceived comprehension. Lab attendance included categories: lab habits, feeling comfortable, and one on one with instructor included: coming more created comfort, creating routines, answering all questions, not feeling scared about having the wrong answer, and building relationships. The codes were related to participants' ability to understand and comprehend information, and how their experience in the lab changed their confidence levels. You can see a full list of codes, sub-categories, categories, and themes in Appendix E.

The survey was split into two sections and the qualitative data was based off of these two sections. The first eight questions of the survey focused on confidence and the last eight questions focused on self-perceived comprehension. When student activities performed in the lab were defined in the interviews, there were clear distinctions on how to integrate them among the two sections of the survey. Those activities that were labelled under the group activities category centered around confidence and were connected to the first part of the survey. Those activities that were labelled under the individual category were connected to self-perceived comprehension and were connected to the second part of the survey. Drawing from the survey constructs, the categories created from the interviews were substantially significant for observation and analysis.

## CHAPTER 4: RESULTS

### Quantitative Findings

Of all the respondents of the first survey, 81.6% were female and 18.4% were male. Sixty percent were white and 13.12% were African American. Thirty one percent labelled themselves as other and the rest were a small fraction of varying races. In the first survey, four (4) identified themselves as English as Second Language (ESL) students, 20 identified themselves as first-generation college students, and three (3) identified themselves as English Language Learner (ELL) students (those who learned English at the same time as another language). One student identified as first-generation and ESL and three (3) identified themselves as first-generation and ELL. Another six didn't identify with any of the aforementioned groups.

In the second survey, 25 of the 39 participants responded or 6.6% less than survey one. Fifty-five percent were White and 3.4% were African American. Thirty one percent labelled themselves as others. In the second survey four (4) identified themselves as ESL students, 12 identified themselves as first-gen college students, and three (3) identified themselves as ELL learners. One student identified as first-generation and ESL and one (1) identified as first-generation and ELL. Another three did not identify with any of the aforementioned groups. See Table 1 for characteristics of the sample.

**Table 1***Survey Participant Characteristics*

	Survey One		Survey Two	
	N	%	N	%
Male	7	18.4%	3	12%
Female	31	81.6%	22	88%
White	23	60.5%	16	55.2%
African American	5	13.12%	1	3.4%
American Indian or Alaska Native	1	2.6%	0	0%
Asian	3	7.9%	3	10.3%
Native Hawaiian or Pacific Islander	0	0%	0	0%
Other	12	31.6%	9	31%
ESL	4	10.8%	4	16.6%
First-Generation College Student	20	54.1%	12	50%
ELL	3	8.1%	3	12.5%
First-generation ESL	1	2.7%	1	4.2%
First-generation ELL	3	8.1%	1	4.2%
None Chosen	6	16.2%	3	12.5%
Total N	39		25	

Of the participants who took survey one, 36.8% never attended the lab. Of the 63% remaining, 44.7% were considered low users and attended the lab only once or twice during the semester. Table 2 provides the average minutes in the lab per visit. The average time spent in the lab per visit for low users was 53 minutes. Medium users were 7.9% of the sample and the average time spent in the lab was 33 minutes and high users were 10.5% of the population and spent the longest time in the lab with an average of 75 minutes.

**Table 2***Lab Users and Average Minutes in Lab Per Visit*

	N	%	Average Minutes Spent in Lab Per Visit
Zero User	14	35.8%	0
Low User (1-2 visits)	18	46%	53
Medium User (3-7 visits)	3	7.7%	33
High User (8+ visits)	4	10.2%	75
Total N	39		

The surveys were identical and administered at the beginning of the semester and the end of the semester. The survey asked students to rate their levels of confidence in writing and reading. It also asked students to rate their comprehension in different aspects of English. It was a standard Likert scale with five categories from strongly agree to disagree. The findings from this stage answered the quantitative research questions regarding increased student confidence and self-perceived comprehension from the beginning of the semester to the end of the semester. Those who did not complete the second survey were not used in either the paired t-test or the comparisons between survey one and survey two.

A paired t-test was conducted to compare the questions from the beginning of the semester to the end of the semester. The questions were divided into two groups: survey one and survey two. Survey responses in Table 3 below marked with an asterisk were significantly statistic and saw a gain from the beginning of the semester through the end of the semester. The paired t-test found a significant positive increase ( $p < .05$ ) for questions 1, 2, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, and 18 listed below. This significant increase shows us students who attended the lab found an overall increase in their confidence. There was an increase in confidence related to student writing, organizing a paper, and pulling main themes and ideas from different texts. The positive correlation



between survey one and survey two resulted in an overall increase in students' confidence and self-perceived comprehension. By the end of the semester, students felt they could accomplish these tasks in a more confident manner, with greater success.

Although these results suggest that participants felt more confident in reading and writing, there was no significant difference in questions 3, 4, 5, 7, and 13. While the surveys reported an overall increase in pulling themes from readings, there was not a statistically significant increase in understanding textbooks and academic journals. This leaves the question of whether students felt they could pull the main theme out, yet still not feel as confident with their reading in general. Breaking down the survey results into groups of high, medium, and low lab users below helped define the results more.

**Table 3**

*Paired T-Test and Means of Survey One and Survey Two*

		Mean	N	Sig.
Pair 1	S1 I feel confident in my writing skills.	3.81	25	
	S2 I feel confident in my writing skills.	4.12**	25	<.001
Pair 2	S1 I feel confident writing a paper about a topic I'm not an expert on.	3.04	25	
	S2 I feel confident writing a paper about a topic I'm not an expert on.	3.84*	25	.004
Pair 3	S1 I feel confident reading my textbook.	3.80	25	
	S2 I feel confident reading my textbook.	3.96	25	.235
Pair 4	S1 I feel confident reading academic journals.	3.52	25	
	S2 I feel confident reading academic journals.	4.00	25	.417
Pair 5	S1 I am confident finding information from a source to put in my papers.	3.76	25	
	S1 I am confident finding information from a source to put in my papers.	4.20	25	.944
Pair 6	S1 I am confident in identifying the main themes in textbook readings.	3.68	25	
	S2 I am confident in identifying the main themes in textbook readings.	4.08*	25	.012

Pair 7	S1 I am confident in comprehending my assigned readings.	4.04	25	
	S2 I am confident in comprehending my assigned readings.	4.28	25	.196
Pair 8	S1 I am confident in writing a paper.	3.72	25	
	S2 I am confident in writing a paper.	4.12*	25	.007
Pair 9	S1 Overall, I am confident in my writing skills.	3.52	25	
	S2 Overall, I am confident in my writing skills.	4.08*	25	.030
Pair 10	S1 Writing papers comes to easy to me.	3.28	25	
	S2 Writing papers comes to easy to me.	3.72**	25	<.001
Pair 11	S1 I can write a paper about a topic I am not an expert on easily.	2.92	25	
	S2 I can write a paper about a topic I am not an expert on easily.	3.72	25	.320
Pair 12	S1 Reading textbooks is easy to me.	3.32	25	
	S2 Reading textbooks is easy to me.	3.88*	25	.005
Pair 13	S1 Reading academic journals is easy to me.	3.40	25	
	S2 Reading academic journals is easy to me.	3.92	25	.112
Pair 14	S1 Understanding academic vocabulary comes easy to me.	3.20	25	
	S2 Understanding academic vocabulary comes easy to me.	3.80	25	.595
Pair 15	S1 Inserting sources into a paper is easy to me.	3.60	25	
	S2 Inserting sources into a paper is easy to me.	4.12*	25	.006
Pair 16	S1 It's easy to identify the main themes in a textbook.	3.33	25	
	S2 It's easy to identify the main themes in a textbook.	3.95*	25	.003
Pair 17	S1 I am confident in comprehending my assigned readings.	3.52	25	
	S2 I am confident in comprehending my assigned readings.	4.12*	25	.009
Pair 18	S1 Overall, my self-perceived comprehension come easy to me.	3.44	25	
	S2 Overall, my self-perceived comprehension come easy to me.	4.04*	25	.004

\*Indicates a statistically significant difference between (Survey 1) S1 and (Survey 2) S2 at  $p < .05$ .

\*\* Indicates a statistically significant difference between (Survey 1) S1 and (Survey 2) S2 at  $p < .001$ .

### ***Survey Mean of Confidence and Comprehension of All Users***

When combining the survey questions into two scales: confidence in writing and self-perceived comprehension, a paired t-test was done to see if the mean rose between the first survey and the second one. The paired t-test found significant increases in confidence in writing and the self-perceived comprehension from the first and second survey (for students who took both surveys). See Table 4 for results.

Both the confidence and comprehension scales were statistically significantly different for survey 2 indicating there was a change in confidence and self-perceived comprehension from the beginning of the semester to the end. Table 4 looks at all users of the lab confidence in writing and self-perceived comprehension from survey one to survey two. Students' confidence rose 11% overall throughout the semester. The mean rose from 3.65 to 4.05. Additionally, students' self-perceived comprehension rose 18% throughout the semester. Overall, the mean rose from 3.33 to 3.92. However, this scale is representative of the entire sample that completed survey one and survey two. It is imperative to separate the classes of lab users in high, medium, and low, and zero participation to understand if attending the lab had an association with students' perceptions. Depending on the results, one may be able to identify a higher trend in confidence and self-perception in comprehension when compared to the number of times they attended the lab.

**Table 4**

*Paired T-Test Between Overall Confidence in Writing and Self-Perceived Comprehension in All Users*

	Survey One		Survey Two		Sig.
	N	Mean	N	Mean	
Confidence in writing	25	3.65	25	4.05*	.003
Self-perceived comprehension	25	3.33	25	3.92**	<.001

\*Indicates a statistically significant difference between S1 and S2 at  $p < 0.05$ .

\*\*Indicates a statistically significant difference between S1 and S2 at  $p < 0.001$ .

***Survey Mean of Confidence and Comprehension of High Users***

When looking at survey one and survey two for high users of the lab (those who visited the lab eight times or more throughout the semester), there is a statistically significant difference between survey 1 and 2. Table 5 looks at the overall confidence and self-perceived comprehension in high lab users. The mean for confidence rose by 35%, from 3.06 to 4.38, from survey one to survey two, indicating the sample of high users felt more confident at the end of the semester. Additionally, the means of comprehension rose by 46% from 2.89 to 4.22.

This is promising; however, these findings must be interpreted with caution given that the sample size was very small ( $N=4$ ). These findings were further explored in the qualitative interviews with high users.

**Table 5**

*Paired T-Test Between High Lab Users' Overall Confidence and Self-Perceived Comprehension*

	Survey One		Survey Two		Sig.
	N	Mean	N	Mean	
Confidence in writing	4	3.06	4	4.38*	.019
Self-perceived comprehension	4	2.89	4	4.22*	.008

\*Indicates a statistically significant difference between Survey 1 (S1) and Survey 2 (S2) at  $p < .05$ .

### ***Survey Mean of Confidence and Comprehension of Medium Users***

When looking at medium users (those who attended the lab 3-7 times during the semester) there is no statistically significant difference for either confidence or self-perceived comprehension. Table 6 looks at the overall confidence and self-perceived comprehension rates of medium lab users. The mean in confidence rose 2% and their self-perceived comprehension rose 16% from the beginning of the semester to the end of the semester.

These results may indicate attending the lab helped students understand the material; however, not enough to see a rise in their confidence. However, the very small sample size (N=2\_ cannot provide a thorough analysis of lab users who visit for shorter periods. Students who walked out of the lab understanding the material but not feeling confident about it may have experienced short-term benefits, and they may not carry these skills out to other classes.

**Table 6**

*Paired T-Test Between Medium Users' Overall Confidence and Self-Perceived Comprehension*

	Survey One		Survey Two		Sig.
	N	Mean	N	Mean	
Confidence in writing	2	3.11	2	3.37	.164
Self-perceived comprehension	2	2.94	2	3.44	.070

\*Indicates a statistically significantly difference between Survey 1 (S1) and Survey 2 (S2) at  $p < .05$ .

***Survey Mean of Confidence and Comprehension of Low Users***

When looking at low users (those who attended the lab one to two times during the semester), there is a statistical significance in students' self-perceived comprehension, but not in their confidence. Table 7 looks at the overall confidence and self-perceived comprehension rates of low lab users. The mean in confidence rose only 7% from the beginning of the semester to the end (from 3.86 to 4.13). However, their self-perceived comprehension rose 18% from 3.43 to 4.10.

These results may indicate that attending the lab helped students feel better about self-perceived comprehension and they may have felt they learned a lot; however, it may not have been enough to raise their confidence to a statistically significant level. This could also mean, like the medium users, that students may not carry the confidence over to other classes. While a larger sample of students were classified as medium users, the relatively small sample size should be considered when discussing the implications of these results (N=12).

**Table 7**

*Paired T-Test and Means of Low Lab Users' Overall Confidence and Self-Perceived Comprehension*

	Survey One		Survey Two		Sig.
	N	Mean	N	Mean	
Confidence in writing	12	3.86	12	4.13	.108
Self-perceived comprehension	12	3.42	12	4.10*	.002

\*Indicates a statistically significant difference between Survey 1 (S1) and Survey 2 (S2) at  $p < .05$ .

### ***Survey Mean of Confidence and Comprehension of Zero Users***

There was no statistically significant difference between survey one and survey two for those who never attended the lab. Table 8 looks at overall confidence and self-perceived comprehension rate of those who did not utilize the lab at all. Their confidence from the beginning of the semester to the end of the semester decreased 7%. Their self-perceived comprehension only increased by one percent. While there are a lot of determining factors in student confidence and self-perceived comprehension, for this study, the only difference between these students and those who attended the lab is the participation in lab. Results suggest that the longer students stayed in the lab the higher rate of increase of their confidence and self-perceived comprehension. However, the small sample size ( $N=7$ ) was very low so the results must be interpreted with caution.

**Table 8**

*Paired T-Test and Means of Zero Users of the Lab Overall Confidence and Self-Perceived Comprehension*

	Survey One		Survey Two		Sig.
	N	Mean	N	Mean	
Confidence in writing	7	3.79	7	3.54	.236
Self-perceived comprehension	7	3.54	7	3.59	.510

## **Qualitative Findings**

In addition to the survey, those who attended the lab were asked to be interviewed at the end of the semester. The findings from this portion of the study illustrated undergraduate students' self-perceived confidence and academic knowledge in English while taking developmental English courses in their first semester of college. The participants who were interviewed came to the lab at least once throughout the semester. They worked on different activities that included: group and individual writing, quietly learning how to recognize the themes in textbooks and journals, holding small group discussions with peers and talking about readings, and attending one-on-ones with the instructor to discuss anything related to their class.

The group activities students worked on centered around confidence, drawing from the first eight questions in the survey and the individual activities centered around self-perceived comprehension, drawing from the last eight questions in the survey. The student-structured lab was voluntary and students created their own schedule in the lab. They were no time restraints or requirements of what they needed to accomplish in the lab. They chose to work individually or alongside others. They also chose how long to work and what they wanted to work on with the instructor.

From the participants who attended the lab, a total of nine (9) people were interviewed. Four of them were high users of the Reading and Writing Lab (eight or more visits), two of them were medium users, and three of them were considered low users. All names have been changed to pseudonyms to protect their identity. Table 9 describes the participants who participated in the interview. In the interviews, students discussed which activities they worked on the most and which ones they enjoyed. These activities were



labelled in the wordles below. The larger the word means the more the activity was mentioned. Drawing from the survey, the student-structured theme was split into two categories: group and individual activities. The group activities were integrated with the first section of the survey that was related to confidence and the individual activities were integrated with the second section of the survey that related to self-perceived comprehension. Assessing their personal experiences in the lab allowed me to interpret their answers and categorize activities appropriately.

Hope, Victoria, and Sammy were all low users of the Reading and Writing Lab. Hope identified herself as a white female who was a first-generation student. Victoria identified herself as “other” under race and as an ESL and first-generation student. Sammy identified herself as an Asian female who was ESL. Mary and Dana were part of the medium user’s group. Mary and Dana both identified themselves as white females who were first-generation students. Jason, Theresa, Hailey, and Jason were all high users of the Reading and Writing Lab. Jason identified himself as an African American male who was a first-generation student. Theresa identified her race as “other” and as a first-generation student. Hailey identified herself as a white female who was also a first-generation student. Gillian identified her race as “other,” and she also identified herself as an ELL student.

**Table 9***Participants of the Interview*

Name	Gender	Race	Self-Identifying	User
Hope	Female	White	First-generation	Low
Victoria	Female	Other	ESL / First-generation	Low
Sammy	Female	Asian	ESL	Low
Mary	Female	White	First-generation	Medium
Dana	Female	White	First-generation	Medium
Jason	Male	African American	First-generation	High
Theresa	Female	Other	First-generation	High
Hailey	Female	White	First-generation	High
Gillian	Female	Other	ELL	High

The results of these interviews yielded two major themes from the lab: 1) a student-structured lab gave students the power to pick and choose their strategies; 2) and lab attendance was key. The student structured lab theme had two sub-categories: a) group learning and b) individual was mapped on to the concepts of confidence and self-perceived comprehension above.

The group learning category under the student-structured learning activities theme had sub-categories such as small group discussions, group writing and group reading. Small group discussions included conversations about classwork and readings that led to a greater understand of the material students needed to learn. The student-structured learning activities had students moving from one activity to the other independently or in a group. The group learning activities category was associated with increased confidence

as related to the first part of the survey because allowing students to move freely in their studies put them in control of their education. Their confidence grew as students talked to other students and participated in group activities because they no longer felt alone in their thinking. Witnessing other students' struggles and confusion appeared to urge students to help them and subsequently appeared to build their confidence. Among this sample, students appeared to increase their responsiveness and decided what was most important to them.

The individual category under student-structured learning activities meant students could come in and work on their reading or writing independently and learning how to focus on material. This gave students the opportunity to increase their self-perceived comprehension by being independent. The independent category was associated with increased self-comprehension as related to the second part of the survey because students felt they could do the assignment on their own and really took their learning to an independent level. Working on individual material quietly gave students an opportunity to dive deeper in their studies. Students reported they felt like they started to understand the material more thus, raising their self-perceived comprehension.

The theme lab attendance was a key factor in both confidence and self-perceived comprehension. The more that students attended, the better their lab habits were. When students formed routines in the lab, they were able to take learning into their own hands and create a community within the lab. Students came to the lab with an agenda and learned what techniques worked for best for them. They asked the instructor specific questions and did not feel anxious like they may have in the classroom. Relationships building with the instructor led to trust and students felt confident discussing material

with the instructor. They came in with many questions and felt comfortable asking them. Attending lab was associated with both confidence and self-perceived comprehension because of the nature of the comfort level of students attending.

Looking at each of these themes in greater detail, yet through the lens of varying levels of lab users offered greater detail about and what benefited each group the most.. Additionally, I took notes as I observed what was occurring in the lab. In my notes, I wrote down the routine's students created and the different activities they performed. These notes helped form a picture of what the routines were for each of the groups throughout the semester.

## **Confidence**

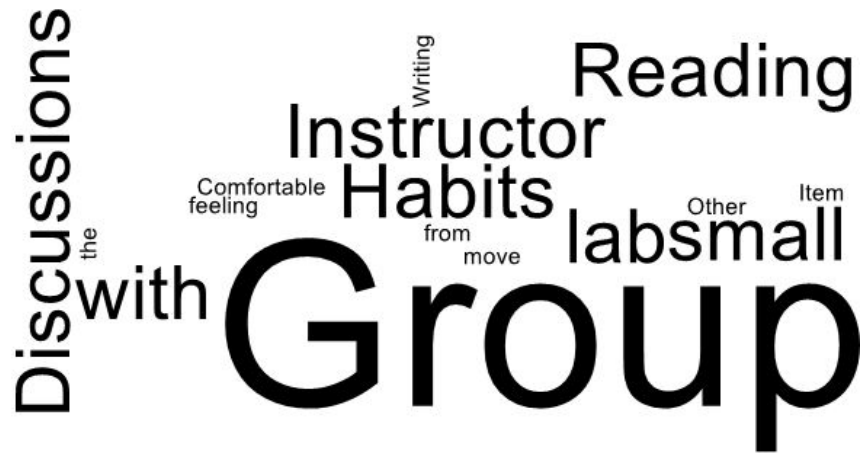
### ***High Users and Confidence***

When dissecting the sample into different levels of users who attended the lab, the level of the higher user's confidence at the end of the semester became clear. Many of the students mentioned that the connection to the instructor helped them feel more comfortable and made the lab more accessible.

High lab users attended the lab most and appeared to create routines that involved all aspects of the lab. Students performed all the different activities in the student-structured lab. Unlike medium and low users who didn't attend as much, high users had the ability to spend more time working on their chosen activities.

**Figure 1**

*High User Activities Related to Confidence*



High users thrived in attending lab and student structured activities in the lab.

High users spent an average of 75 minutes in the lab, which gave them time to do multiple activities. Figure 1 shows the frequency of lab activities high lab users discussed in their interviews that related to their level of confidence. The first word that sticks out is group. These activities included small group discussions, group reading and group writing. Different facets of these two themes such as creating routines in the lab, becoming comfortable in the lab with the instructor and the lab itself, and utilizing a multitude of different activities (including small group discussions) increased students' satisfaction and overall confidence in themselves. High lab users reported spending more time in group activities than individual ones. Given the amount of time they spent in the lab in both visits and time, the high lab users in this study spent more time performing each of the activities.

### ***Lab Attendance***

**Feeling comfortable.** As high users continued to come in more frequently, they

appeared to create routines of what they wanted to do in the lab. While the lab was student structured, high lab users reported it took some times to understand which activities to perform in the lab. In the beginning, students were more hesitant but as they got comfortable, they created their own routine. This routine appeared to create more confidence in the users as they learned what they needed to focus on in the lab. In the beginning of the semester Theresa was hesitant to come to the lab and admitted she really didn't want to write papers or read her assignments. As the semester progressed, Theresa (first-generation student) reported in her interviews that she started to see the value in coming in the lab for feedback on more things. Likewise, Gillian, an ELL student, shared the same sentiments:

Being in the lab made me focus on my work. It became more meaningful as I attended more. I felt like since I was there, I needed to do more work and that motivated me to study different things closer. I would write more and read for more information. Since I was spending so much time in the lab, I ended up doing more work. This helped me increase my confidence because I kept looking over the information more than I would have if I were in my dorm room alone.

**One on one with instructor.** Jason said, "Talking to the instructor face to face really helped me feel more comfortable in asking question." Participants also reported that the conversations made them critically conscious of their material because there was a discussion on different topics and lessons on how to use this material in their work. Participants suggested that the instructor taught students how to find sources and how to use them in their assignments, thus making the material clearer and more defined.

Hailey said, "Helping me talk about what steps I should take next and what the main points in a text had really helped me." Theresa, a first-generation student, indicated a large portion of the reason she loved going to the lab was the one-on-one time with the instructor because she learned more:

At the beginning I would have labelled my confidence a three or a four because I don't really enjoy English. But since I've been in your lab, I'm more like a 7 or 8 because you make things intriguing and break down how to actually write an essay in high school, I didn't really get that. It was more of following the guidelines and actually went into detail about what the essay actually needed, not just an outline. I didn't know what an academic journal was and I feel better about reading them. I can pick up what's being stated and what the message is trying to convey. That one-on-one time with you was great because the attention was on me and what I needed to do.

### ***Student Structured Learning Activities***

**Small group discussions.** Another activity that increased confidence among high users was small group discussions. The lab provided a safe zone where participants could come in and discuss their classes with their classmates and their instructor. Unlike previous research, small group discussions were a large portion of the lab. While the instructor was there and communicated, these discussions were student led and open-ended. Different from structured writing labs where students come in for work on papers and listen to another single peer like in previous research, the Reading and Writing Lab allowed for organic conversations that weren't limited to certain subjects. This factor may have increased the success of the Reading and Writing Lab.

The high users who were interviewed were quoted as saying they enjoyed the carefree conversation that occurred in the lab. Theresa said, "discussions didn't have a lot of pressure to them and I didn't feel like I would be judged by what I was saying." The interviews suggested that the small group discussions gave students more time to think about their work and explore topics deeper because they didn't feel judged. Interview participants of high users confirmed that talking about their readings in small groups helped increase confidence in their readings. The sample size for high users was small; however, high user students who were interviewed appeared to feel more confident about

writing their papers in both the survey and interviews after their small group discussions.

Jason, a first-generation college student, discussed small groups as part of the reason he kept attending lab:

Talking it out helped me understand the information. Hearing what other people had to say about it and then after writing down the correct answer and comparing it to my answer. That steered me in the right direction in what I had to look for. Face to face conversations click more because you feel more comfortable when asking questions.

### ***Medium Users and Confidence***

Medium users had the smallest sample size of all the participants, but these findings suggest they still found success in the lab; however, it was lower than high users of the lab. Medium users appeared to focus on questions about material in class and with the average of 30 minutes per visit they had the shortest visits of all users, but they seemed to be more efficient in the lab. Although was a small sample size, the results between the users were similar. They reported they didn't connect as much with the instructor, yet still came for one-on-one time with the instructor for specific questions. Looking at the findings, they also didn't participate as much or as long in small group discussions but did work on their writing and share ideas. Like high lab users, medium lab users appeared to focus more on group activities. However, they also spent the least amount of time on each activity because they move around from one activity to the next as much as the high lab users. They performed a lot of the same activities as high lab users; however, they did not work as in-depth as high users because they didn't spend as much time in the lab.



**Figure 2**

*Medium User Activities Related to Confidence*



The snapshot above indicates the level of activities that medium user students found to work for them lab. As pictured in Figure 2, group activities and moving from activity to another were important factors for medium users related to raising their confidence rating. Without more frequent attendance it appears that it was difficult for this group to create lab habits like those who attended the lab more frequently. However, as represented in the figure, they were comfortable in the lab. They participated in most of the same activities as those of high users, but it was not as frequently or for as long. This may be an indicator of why their confidence is so much lower than that of high users.

***Student Structured Learning Activities***

**Group writing.** Group writing offered students the opportunity to work alongside each other as they wrote their papers. The group writing may have helped increase confidence because even though they were not working on the same paper, students said that sitting next to someone who was also writing helped them focus more on their work.

Students reported they felt comfortable because there was no pressure to talk about things, rather they were next to someone else who was also working, and they didn't feel alone. Mary, a first-generation student, said, "I wasn't pressured to talk, but I had some time to just work on my material."

**Small group discussions.** Although the findings were limited, small group discussions were important to medium users because they would pull information out. Even though they didn't stay as long as high users, students who were interviewed still felt their confidence increase as they talked to their peers. Dana, a first-generation student, explains:

It was nice when other people were in the lab because they sometimes had questions I didn't think of and I could hear everyone talk about how to approach it. It was nice to attend virtually and still get help on the topic. It was nice to meet with people and it helped me decipher how to improve my writing. It made everything a little bit clearer. Talking to peers outside of the classroom lessened the stress I had by talking in class, but still made it easy to understand what was happening. I could take the information back to class and feel like I was able to discuss it.

**Moving from one activity to the other.** Moving from one item to the other was an option because the lab was not structured. This gave the power to students to choose what material they wanted to work and for how long. Giving students options on what to work on allowed students to pick material they didn't feel comfortable with and gave them an opportunity to ask questions or work on the material in lab. Mary said, "It increased my confidence in certain things because once I was able to figure one part out, I didn't have to wait to move to the next part." Dana reported in her interview that she found the amount of time she was in lab helped cover multiple topics:

I could meet one-on-one with you, but then I could talk in a smaller group and ask specific questions about the material from class. It was different than the classroom because I could choose what I wanted to do. I was able to focus on one

two things during my time there. I know I didn't stay long, but I used my time in the way I felt helped me most in the classroom.

### ***Lab Attendance***

**One on one with instructor.** The medium users didn't stay for very long when they attended lab, but when they came in, the interview results suggest they often had questions about specific material. They appeared to focus their attention on their questions and worked a lot with the instructor on their questions about specific topics. One such topic was writing papers. Dana said, "Meeting with just you helped me understand. The communication we had helped me review my writing and made it clearer." It appears that confidence in students rose as they had their questions answered. Mary gave an example of how this interaction helped her in class:

It increased my confidence in class because I was able to make an outline with you and it gave me a new perspective I didn't have in class. I was able to get ideas on materials and then the way I should write my paper.

### **Low Users and Confidence**

Low users of the lab visited the lab once or twice through the course of the semester. The findings suggest that many low users came to the lab for a specific question and because they were only there once or twice, the users who were interviewed appeared more uncomfortable than other users of the lab. These results suggested that since they spent so little time in the lab, they did not form routines like other users. This could have led to less satisfying experiences in the lab and explains why they did not come back.

### Figure 3

#### *Low User Activities Related to Confidence*



Focusing on a singular topic, low users would spend on average 50 minutes in the lab. As can be seen in Figure 3, low users most frequented activity was one-on-one time with the instructor. Unlike high users who used their time to work on multiple activities, low users appeared to focus on singular questions and asked the instructor for help. Their habits indicated they would seldom would they join group activities and participate in group discussions. They also appeared to prefer to sit alone so they did not participate in group readings or a lot of group writing or group reading. Low users of the lab appeared to attend the lab for one or two items only.

#### ***Lab Attendance***

**One on one with instructor.** Having a faculty member run the Reading and Writing Lab was something students enjoyed because they felt the instructor could help them more than peer work. Often, low user came to the lab simply to ask the instructor a question and then work on that topic until they left. Hope, a first-generation student said, “I like coming to the lab for the bluntness you offered.” She said her biggest reasons for coming to the lab were to ask one-on-one questions and she didn’t really want to participate in the small group discussions. Her confidence increased after attending the lab, but the findings suggest it was related to the questions that needed to be answered.

She didn't discuss anything other than the questions she had. Having an instructor there to help a student understand a singular topic and not talk about much more was something that students enjoyed. Victoria, an ESL student who is also a first-generation student, added:

Showing me different ways of completing a topic or how to examine a topic was great. It was meaningful for me to understand the different issues I was experiencing. It made me more critically conscious of the work I was doing.

### ***Student Structured Lab Activities***

**Moving from one activity to the other.** The findings from this sample suggest this group of students' habit of focusing on piece a of material from class was something low users did to feel accomplished. Unlike medium and high users who moved from item to another more, low users reported coming in with specific issues. The average 50-minute stay focused on reading and understanding their texts more and writing their assignments. Sammy, an ESL student, said:

I didn't have issues understanding my readings or any themes. I was able to ask questions about my assignments and then focus on writing during my time in the lab. I was kind of sad that I didn't attend more when I saw how connected others were in the lab, but I also didn't have a lot of questions. I wanted the time to be on my paper and nothing else.

In contrast to students' positive outlook on their confidence, there was only a 6% rise in confidence of understanding a text from the beginning of the semester to the end in low users of the lab. There are many reasons why this may be, but when looking at the difference in the activities between low users and medium and high users, the largest activity appeared to be missing was group activities. If students were solely focused on meeting with the instructor they may have had their questions answered, but the findings

suggested they didn't connect to the lab as much other users, thus appearing to change the satisfaction rate of their experience.

### **Self-Perceived Comprehension**

#### *High User Comprehension*

Having spent the most time in the lab, high users were able to utilize the activities in the lab the most. Like their confidence, users who attended the lab more frequently appeared to see a greater increase in their self-perceived comprehension. High users of the lab who were interviewed said attending the lab and focusing on work and being able to accomplish it independently increased their self-perceived comprehension. The findings suggest they were able to work on material in a variety of ways which led to understanding different strategies students could take with them outside of the classroom and the lab.

#### **Figure 4**

##### *High User Activities Related to Comprehension*



All the work in lab was centered around writing, reading, and learning how to focus on important material from class. As seen in Figure 4, high lab users worked on multiple

activities that were important to high self-perceived comprehension. Focusing on material, building habits, being comfortable in the lab and learning different strategies such as quietly reading, and writing appeared to lead high users to feel comfortable in the activities. The amount of time they spent in the lab gave them the opportunity to dive deeper into these activities.

### ***Student Structured Learning Activities***

**Focusing on material.** During the interviews, many students who attended lab said they had a hard time focusing on the material handed to them in the classroom. They didn't want to be judged in class for asking questions, weren't sure what was important, or couldn't take notes fast or detailed enough to understand what to do. Jason, a first-generation student said, "You taught me how to focus on the important parts to help me expand the ideas I could write about." Focusing on material appeared to have a positive effect on students self-perceived comprehension of their school material. Theresa, a first-generation student, stated that talked about the importance of learning how to focus on material taught her how to point out main themes in her readings:

It was hard for me to focus on the material in class, but I would come to the lab and you would help me feel confident about my abilities to understand what was happening. You taught me how to stay on track with the material and how to take proper notes so I could come back and not be lost. That focus helped me learn how identify themes by taking my time and talking about the picture out loud. I learned how to focus on the material through conversation, writing, and reading. This helped me overall.

Even though the lab was student structured, students were required to work on classwork. This meant they came in with things to work on. Bringing material to the lab was a way for students to begin the work they needed help on. The results suggested that by coming into the lab and learning how to focus on the material they needed help with,

they began to learn about the information they needed help with. Gillian, an ELL student, said, “I learned I needed to write more and look up more information. Even though I did a lot of things in lab, I was able to focus on this and got much better at it by the end of the semester.” Similarly, Hailey, a first-generation student, said “learning to generalize texts helped me find bigger meanings. But first, I needed to learn how to step back and focus on that.” Focusing on material meant looking at both big and little details.

**Quietly Writing.** Interview participants discussed how practicing their writing helped them define their outlines, expand their topics, and create more in-depth papers. Students commented that writing increased their understanding of the material that was given to them in class. This rise may be a result of all the time they spent in lab working on their writing. Gillian commented that “writing made me feel like I gained more of an understanding by working on the material given to us in class.” Interview participants said writing helped them learn how to organize their papers and make sure they were filling in all missing spots. It also appeared to help them learn how to write more because they connected writing with looking up more information. Jason, a first-generation student, added:

I felt like I could focus more and felt more at ease because you were there to help me outline and show me how to organize my papers. The writing in the lab really helped me because I worked on it differently than at home. The lab gave me confidence that made me feel like I could leave the lab and still write my papers on my own. I learned how to take my writing skills in other classes as well.

Learning how to write independently appeared to help students analyze different pieces of writing. Being able to write in the lab gave students the opportunity to read their work to the instructor and have immediate feedback. Students felt they learned well this



way because they had someone telling them in real-time how to change their papers, rather than notes on a paper after it was graded. Hailey, a first-generation student, said:

Working on my writing and learning how to write helped me become a better writer. I enjoyed doing it in the lab because I was able to get help right away and learned what I needed to change immediately. It helped me become more aware of what I needed to do, and it helped me learn how to write my future papers.

**Quietly reading.** Learning to identify main themes in a textbook or other

academic reading was something that many students across all user groups said they needed to improve, and the lab appeared to help them. Students often found reading discouraging because many were not sure what the important information was. Jason said, “I felt lost in class because I was trying to get the hang of it and just couldn’t.” It was important for students to learn how to identify themes so they could complete their work for class. Jason discussed the importance of learning how to identify themes:

It was hard for me to get past the fact I didn’t know what was important in the classroom. I started attending the lab because you said it would help. I was able to learn how to read the text and find the themes, which helped me a lot.

According to the interviews, identifying themes was a difficult task for many students. During interviews, students acknowledged they could read the texts, but when trying to pick the main ideas in class, they were not confident in their answers. They did not understand how to identify the themes and relate them to their assignments. Even as confidence and self-perceived comprehension increased throughout the semester, students’ understanding of how to identify main themes and learn how to connect them with assignments saw the slowest growth. Gillian describes the process of learning how to read independently and identifying the themes as such:

Attending lab made me feel like I had to do work. It helped me slow down my reading and look up more of my sources and focus on meaningful work. In the beginning of the semester, I felt like I didn’t understand or feel confident in what I was reading, but as the semester went on and I attended lab, I was able to focus on

learning what was important. It made me feel like I could understand more and knew what was important in my readings. It helped learn what to look for. I was excited about that.

***Medium User Comprehension***

Medium users attended the lab three to seven times in a semester. The average length of their visit was 30 minutes. Although it was the lowest sample size, which totaled two users, medium users appear to be different than high and low users because their stay was short, yet they did not focus on one thing like low users. In the study, the habits of medium users were like high users and they moved from one item to the other. However, unlike high users their short stay did not provide an opportunity to go into much detail. The lack of detail in any student-structured activity meant students were not able to take time to dive into the topic or activity.

**Figure 5**

*Medium User Activities Related to Comprehension*



While they were comfortable in the lab and enjoyed it, they appeared not to get into a routine as much as high users. Figure 5 showed a variety of individual activities

that medium users frequented in the lab related to self-perceived comprehension. Even though there was a large frequency of activities, medium users did not spend so much time on each activity like high users did. As seen in Figure 5, lab habits is almost invisible, differentiating the medium lab users from the high lab users. Similarly, to low users, medium users worked more on quiet activities. They focused on one-on-one time with instructor yet still felt very comfortable in the lab.

### ***Student Structured Learning Activities***

**Quietly writing.** Writing independently and understanding how to pull all themes and points together is an important skill for any college student. The interviews and time spent in the lab suggested medium users worked on independent writing; however, it was not as long or detailed as those who stayed in the lab for longer period. Because of this, they were limited to the amount of writing they could complete with the instructor near them. These short stays may have affected the rate of increase in students self-perceived comprehension. However, even with the statistics lower than high users, medium users like Mary found it helped her feel more comfortable with writing.

I liked writing in the lab because it gave me ideas, taught me how to make an outline, what to include in the writing and how to meet all the requirements. It also taught me how important research was on writing a paper.

Medium users had an overall smaller increase in their self-perceived comprehension; however, in the interviews, they discussed how the lab was useful in helping them learn different topics of writing. However, from the research whether done it's difficult to know if this material is sufficient for helping students remember for future writing assignments.

**Focusing on material.** Learning to focus on material was important, especially for medium users. Most students came to the lab with a specific set of materials they wanted work on, and they were able to learn how to research more and dig deeper for information. This appeared to expand their knowledge and feel better about the material they were learning. Mary said:

It was hard to focus on readings that I was bored with. However, learning to find the important material helped me learn how to focus and taught me skills so I wouldn't have to read every page.

Not only learning how to read text was important, but many users suggested the act of looking for deeper information was important. This type of focus meant students needed to slow down as they were doing their work. These findings suggested that slowing down helped students see what was important. Although the sample size was small, medium users discussed how their time in the lab taught them rushing through assignment wasn't going to accomplish the bigger goal of truly understanding the material. Gillian said:

Looking up sources and studying them closer really helped me. The lab showed me how to take my time and focus on one item at a time. This helped me slow down and find more meaningful work.

### ***Lab Attendance***

**One on one with instructor.** Coming to the lab for medium users was an opportunity for users to talk to the instructor. Both medium users that were interviewed, (Gillian and Mary) said the lab was important to them because they could come in with specific questions about any material and have the instructor talk to them one on one. Given the style of the lab and the other services offered on campus, this type of interaction could

only occur through the Reading and Writing Lab which may be part of the reason it was so successful. Mary said:

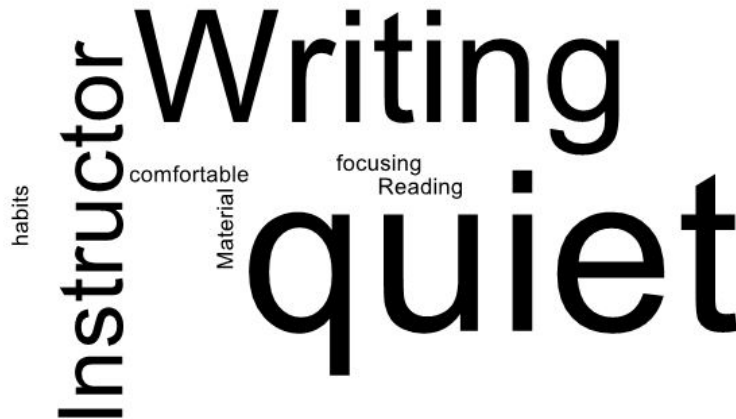
It was helpful to have someone else besides my teacher to talk about the assignments. I felt like I could talk about different issues and the other perspective gave me new ideas and helped expand the current ones. I learned a lot talking to the instructor privately.

***Low User Comprehension***

Low users only visited the lab once or twice throughout the semester. These visits appeared to be centered around independent writing and talking one on one with the instructor. Many of them came in and focused on writing a paper and getting help with it as they went along. The lack of time spent in the lab meant students did not create any routines in the lab, nor did they create habits. However, it seemed as students did focus all their energy on writing papers, so they appeared to be learn what writing strategies worked best for them.

**Figure 6**

*Low User Activities Related to Comprehension*



The findings suggest that low users did not come to the lab enough to create habits. As shown in Figure 6, low users attended the lab to quietly write a paper and

spend some time with the instructor. They would have one-on-one time with the instructor and spend their entire stay focusing on the paper. While this method appeared to lead to a greater understanding of the paper they worked on, it is rather presumptuous to say the self-comprehension they felt increase could be taken to other classes. Their interviews focused on the overall experience of the lab and how their self-comprehension may have changed if they attended the lab more frequently.

### ***Lab Attendance***

**Lab habits.** Not attending the lab often meant routines could not be set. Without these routine or habits, it appeared that students came to the lab for a very focused lesson. The small amount of time spent in the lab meant students didn't connect with the instructor as much those who spent more time, they didn't create routines that may have increased their potential of being successful in the lab, and they didn't spend enough time to get as comfortable with the lab as those who attended did. While lab attendance did help with specific tasks and low users did leave the lab with better understanding of their assignments, low users may have benefited from attending more frequently to get more needed general help through the course of the semester. Sammy states:

I only attended the lab twice because I felt confident during class in the beginning part of class. I didn't see the value of coming to the lab. Near the end of the semester I fell behind in class and then attended the lab to get caught up. When I came and saw how much everyone was doing and how they built relationships, I was kinda sad because I realized it probably would have been a good idea for me to come earlier.

### ***Student Structured Learning Activities***

**Quietly writing.** According to the findings, writing was one reason why low users came to the lab. They came in to work on specific papers. This led to some one-on-one time with the instructor to ask for help, but it mainly led to independent writing in the

lab. Low users utilized the time to work in quiet atmosphere without much conversation.

Hope said:

I'm a confident reader but am not confident in my writing skills. I came to the lab to ask specific questions about my papers. I was able to learn more about technical details that I never felt I knew. Going over them really helped me feel like I understood it more. I enjoyed writing essays more and the two times I came helped me learn how to work on my transitions more. I also learned how to use better words. I didn't really get into the conversations with people. I liked putting my ear buds in and only ask questions when I had them.

Low users saw the lowest increase in their self-perceived writing comprehension.

The survey results indicate that those who spent the longest time writing, but doing it on their own without a group, had the lowest self-perceived comprehension rate. This trend appears to point towards success for those who spent longer times in the lab, but also worked with others on their schoolwork.

## CHAPTER 5: DISCUSSION

### Overview

The purpose of this mixed-methods study was to examine the benefits of attending a Reading and Writing Lab in conjunction with a developmental English class for students' confidence and self-perceived comprehension. For the quantitative portion of the study, I analyzed the difference between the first set of survey answered in the beginning of the semester to the second set of survey questions using paired t-tests. Analyzing the results between the two surveys helped me understand which skills students' felt more confident in and if they were statistically significant. In the quantitative analyses, the survey answers were also compared between those who never used the lab and low, medium, and high users. For the qualitative portion of the study, I interviewed lab attendees. Low, medium, and high users were interviewed to capture a wider lens of students who attended the lab and which experiences increased their self-perception the greatest. This chapter includes 1) summary of the data, 2) discussion of the findings 3) strengths and limitations 4) recommendations and 5) conclusion.

### Summary

This mixed-methods study attempted to explore this research questions:  
Primary Research Question: What makes the Reading and Writing Lab useful and effective when attending concurrently to a development English class? Independently working on schoolwork, a student structured framework, and attending lab more frequently were themes that emerged from the qualitative portion of the study. Moreover, the survey questions confirmed that there was an increase in confidence and self-perceived comprehension. There appears to be an association between lab attendance and



an increase in self-perceived comprehension and confidence throughout the semester. Further, it appears by attending the lab under voluntary circumstances more frequently and for longer times throughout the semester, the higher rate of the user satisfaction a user will have. The following sub-questions were developed from the primary research question:

## **Quantitative**

### ***Research Question 1***

Does attending a Reading and Writing Lab concurrent to a developmental English class increase a student's confidence from the beginning of the semester to the end of the semester more than just attending class? It appears through the two surveys taken that a student's confidence does increase from the beginning of the semester to the end of the semester. High users followed by medium and low users saw a greater gain in their confidence than those who never attended the lab.

The results indicated the more frequent and longer lab visits in the Reading and Writing Lab increased students' overall confidence in writing papers. Confidence rose 11% when incorporating all participants who took survey one and two, including those who never attended the lab. This increased the mean from 3.65 to 4.05. Confidence among medium users rose only 8% from the beginning of the semester to the end; the mean increased from 3.11 to 3.37. Similarly, in low users, similarly, confidence rose 7% and the mean rose from 3.86-4.13. However, the largest increase in confidence came from high users. Confidence in high users rose by 43% and the mean rose from 3.06 to 4.38 from survey one to survey two, indicating that the sample of high users felt more

confident at the end of the semester. These results suggest that those who attended the lab had a higher confidence than those who only attended minimally or not at all.

### ***Research Question 2***

Does attending a Reading and Writing Lab concurrently to a developmental English class increase a student's self-perceived comprehension more than just attending class (from the beginning of the semester to the end of the semester)? Overall, students' self-perceived comprehension rose 18% throughout the semester with the mean rising from 3.33 to 3.92. This increase indicated that as the semester progressed, students believed they better understood the information in their developmental English class more. Medium users self-perceived comprehension rose 17% from the beginning of the semester to the end and the mean rose from 2.94 to 3.44. Low users saw a 20% rise in their self-perceived comprehension and the mean rose from 3.42 to 4.10 from the beginning of the semester to the end. Like confidence, high users saw the greatest increase in self-perceived comprehension. High users' self-perceived comprehension rose 46% from the beginning of the semester to the end of the semester. The means of comprehension in high users rose from 2.89 to 4.22. Survey results suggested the more visits a student had to the lab, the higher rate of their self-perceived comprehension.

### **Qualitative**

### ***Research Question 3***

How, if at all, does the Reading and Writing Lab help increase a student's confidence? With emerging themes such as lab attendance, student structured lab time, and independent work, students felt more confident in their understanding of school material and their overall confidence in class. They also reported that they felt more

confident coming to the lab more often and asking questions. The incremental confidence students felt as the semester continued built on to the overall confidence rate at the end of the semester. These themes all have one thing in common: doing work in a designated area led by a faculty member outside of the classroom. Focusing on something like class and going above and beyond by willingly participating in a lab with other students are and an instructor can increase the amount of knowledge a student will learn throughout the semester.

#### ***Research Question 4***

How, if at all, does the Reading and Writing Lab help increase students self-perceived comprehension? The same large themes that students indicated with confidence were also present when students indicated a higher self-perceived comprehension rate. The experiences students reported in the lab indicated a focus on material outside of class with a smaller subset of students and a professor who helped increase their understanding and made them feel more comfortable in the class. Additionally, working with other students and discussing topics in class created comfort amongst participants in the lab and a higher understanding of material. By discussing classwork informally in an academic setting like the lab, it appears students felt at ease and felt they learned more than just attending class.

#### **Discussion**

Like previous research (Chambers and colleagues, 2010) suggests, students who take developmental English classes or non-credit English classes find their confidence is lower than students who are admitted to traditional English classes. Previous research (Chambers and colleagues, 2010; Chen and Wang 2018) has highlighted that extra

services for students can increase confidence and self-perceived comprehension especially for traditionally underserved population of students, like those who are taking a developmental English course. In the Reading and Writing Lab, thirty-one of the 39 students who attended the lab and took the developmental English course identified themselves as a type of traditionally underserved student. Most participants (n = 20) identified themselves as a first-generation student.

Through the experience I monitored, many students who were beginning to attend the lab would come in and only ask a few questions. They wouldn't stay long, nor would they talk much. Part of my responsibility as the lab facilitator was to try to make the student's feel comfortable. I would have shorter, non-invasive, open conversations that made the student feel comfortable. This led to greater connections with me, which many of the users discussed in their interviews. There were snacks and drinks in the lab as well, which aided in making the lab feel different than the classroom. This nature of the lab, being student-structured and easy to attend, didn't have the same high expectations students felt in a classroom. There was not a designated time for assignments, students were not following an agenda that the instructor created, nor did I ask or instruct them to work on certain material. The student-structured lab was an individually centered lab where each student decided what was most important for their growth in their English class. My observation was the sooner that students realized it was a student-structured lab, the quicker they were to take charge and focus on what they wanted to do.

### ***Confidence***

According to the survey results and the interviews compiled, students saw an increase in their confidence in writing skills as the semester progressed. Confidence rose

by 9% from the beginning of the semester to the end of the semester survey in the overall sample. Lab attendance was important for confidence. The more students attended lab; the greater confidence rose. There was an 84% overall decrease in confidence levels for high to low lab users throughout the course of the semester. Things that high lab users did differently included focusing on more group related activities with other members and frequenting the lab more for longer periods of time. Additionally, I observed when students were in lab, they worked on multiple activities in the labs that led to their success. Giving students the power to choose what to work on meant they were in control of their lab. Like previous research states (Bickerstaff, Barragan, and Rucks-Ahidiana, 2017), not only was it important to the success of the lab, it also gave students the opportunity to learn what they needed to work on.

Low users of the lab had a lot of information they needed to work on, but it was for very specific writing assignments. Since they came to the lab for such a short time, they only visited the lab for those assignments and didn't gain the benefits that other users gained. Working on one assignment or one style did not give students the ability to learn different methods which could work better for them. Since the lab was voluntary, the instructor could only encourage students to come back to the lab. However, low lab users appeared not to spend inadequate time in the lab to gain the confidence that led to success. Without small successes, students were not compelled to continue attending the lab. I observed that low lab user goals were to pass the assignment and without a big picture goal, they did not feel a reason to come back to the lab.

Medium users visited the lab more frequently, but their visits were the shortest of all three groups. This didn't provide an opportunity for them to move from one activity to

the next in a successful manner. Instead, they would split their time between different items and not go into as much depth as the other students. This meant that they were not gaining as much confidence as others who stayed longer. While medium users did attend the lab more often, it appeared that they didn't give themselves the opportunity to dive deeper in the strategies they were using to see which one would work best. They would have benefitted more from attending for longer sessions so they could dive deeper in the strategy they were using, or they could have frequented the lab more often so that they had time to successfully complete an activity.

High users had the time during their visits to accomplish one or two different strategies. Since they attended the lab at least eight times they were able to discover which learning strategy worked best for them. From there they were able to create an agenda for themselves while they were in the lab that afforded them the greatest opportunity to be successful. Attending lab so frequently also created small successes that they could see. They would become more confident in their work with each visit because they devoted the time to studying and learning.

The greatest confidence in students appeared to be centered around activities that were done with peers in the lab. In the lab, student structured activities included working on readings and their writing. Question six surveyed confidence in identifying the main themes from textbook readings and showed a 10% increase in all users and thus a statistically significant rise from survey one to survey two. However, high lab users had a 46% while low lab users had only a 6% increase through the course of the semester. Analyzing the habits of the user through interviews showed that high users valued their student structured time more if it included group activities such as small group

discussions and group readings. Low and medium users didn't participate as much in those activities, with low lab users focusing on independent work without group activities. Jason, a high user of the lab said:

As the semester continued and I began to attend the lab, information started to fall into place, and I felt better about class and it increased my confidence. I started to get the hang of it and the schoolwork comes along easier.

Not only were the habits that Jason formed in the lab important, learning how to accomplish them increased his confidence. Some students admitted it was not an easy task to form these habits. Theresa, a high user, admitted in the beginning she did not want to attend the lab, but after a few times she was able to see the value in it and continued to come because it helped her to deeply explore the themes in the readings and her writing deeper. For medium and low users, the difficulty of creating these habits may have stopped them from succeeding any further in the lab.

Once habits were formed, it appeared that students were able to identify the information they needed to learn more cohesively. Learning how to identify this information successfully was something high lab users appeared to perform better. Hailey, another high lab user said, "I talked to my classmates who were in the lab about different things and it helped me expand my questions." Medium and low lab users may not have attended the lab often enough or long enough to learn how to identify this information, thus not feeling as confident as high lab users. For those who utilized the student-structured group aspect of the lab, they were able to not only communicate about different aspects like reading and writing, but this communication helped them work confidently on their own school material.

### ***Self-Perceived Comprehension***

According to the survey results and the interviews compiled, students saw an increase in their self-perceived comprehension as the semester progressed. High users saw the biggest increase in their self-perceived comprehension at 46% from the beginning of the semester to the end. Medium users had a 16% rise in their overall self-perceived comprehension while low users had a 17% increase from the beginning of the semester to the end of the semester.

Specific survey questions related to self-perceived comprehension saw an overall increase from the beginning of the semester to the end of the semester. Question 12 asked about self-perceived comprehension reading textbooks and saw a 39% increase in high lab users, a 23% increase in low lab users and zero increase or decreases in medium users through the course of the semester. Question 10 asked about self-perceived comprehension in writing papers and saw a 56% increase in high lab users, a 9% increase in low lab users and zero change in medium lab users throughout the semester. In interviews, students discussed how learning to do their work independently helped them learn the material. Like Cukras-Gorgas (2006), this research study found that those students who worked on a variety of material and learned what worked best for their personal learning preferences had higher self-perceived comprehension rates. Reading for deeper information, learning how to read assignments to understand them better, and practicing writing all led to higher self-perceived comprehension rates. The data suggest those students who stayed for longer sessions found higher self-perceived comprehension gains throughout the semester.

Low lab users worked on the least varied learning activities at the lab. Since they



were so focused on one learning strategy, their self-perceived comprehension may have gone up, but through the semester they did not develop other strategies that would help with other assignments. The other difference that should be noted is low lab users did not use any group learning strategies. They preferred to work quietly on their own. This may have led to a lower self-perceived comprehension rate because they were not able to explore themes from a different perspective. Their self-perceived comprehension may have risen if low lab users frequented other learning strategies in the lab.

Medium lab users' overall self-perceived comprehension rate was one percent lower than low lab users and reading textbooks and writing papers saw a zero increase in their self-perceived comprehension. As mentioned previously, they attended lab more than low lab users; however, they spent the least amount of time in the lab. During this time, as mentioned before, medium lab users were focusing on multiple learning strategies. However, the short amount of time in each lab did not allow students to dive deeply into these activities and appeared to not understand the topics as much as those who spent a longer amount of time on different strategies. Their self-perceived comprehension may have increased if they spent more time on each learning activity.

High users, as stated previously, had the highest increase of self-perceived comprehension. High users spent a large portion of their lab time assigning themselves work to complete. They came to lab with agenda and planned their time accordingly. By understanding what they had to learn and using these learning strategies students were able to understand their assignments more and increase their overall comprehension. While confidence was built through group learning activities, comprehension appeared to increase the most when a high user worked independently on their assignments. They

were able to focus on their work and try different techniques to see what worked best for them.

The ability to work independently was crucial to raising self-perceived comprehension. In the interviews it was evident that having the ability to work independently was highly valuable to the nature of the success of increased comprehension. Previous research like Bielinska-Kwapisz (2015) found writing labs were used to help with major writing assignments and reported overall grade increases and higher university ties for those who attended. Like previous research, interviews found that writing more was statistically significant in the survey and was an important factor for interview participants.

When students would work on their own, often it was to write. They came to the lab and created outlines, focused on expanding topics, and wrote their assignments. Question 11 surveyed the how students label their comprehension levels on writing a paper, and there was a 67% increase from high lab users, a 25% increase in medium lab users and 20% increase in low lab users. Coming to the lab and work on papers or assignment virtually was something that many students said was a factor in their increased self-perceived comprehension. Mary, a medium lab user said, “It was nice to not to feel pressured to talk to anyone, but I could just work on my writing quietly.” Sammy, a low lab user said, “I liked being able to write and ask you questions as I went along.” However, the frequency of visits and the length of time spent in lab appeared to determine how high their self-perceived comprehension would be and showed a 70% decrease in self-perceived comprehension from high lab users to low lab users from the beginning of the semester to the end of the semester.

### ***Confidence and Self-Perceived Comprehension***

Another factor that appeared to help confidence was one on one with the instructor. All different level lab users interviewed said having a faculty member present helped them understand their schoolwork better. Some participants like Sammy, who was a low user, said, “I preferred to talk to just you and have you answer the questions I had.” Following other research like Komorraju, Musulkin, and Bhattacharya (2010), this study helped confirm that conversations with faculty increased confidence and students felt a greater sense of belonging. Mary, a medium user said, “Talking to you made me more confident.” Having an instructor present gave student an opportunity to ask questions about any of the material they had. Theresa said, “Building a relationship with you while attending the lab helped me immensely and brought me back.” For lab users who came frequently, it also opened the door to a relationship with me, thus creating more comfort in students.

A more in-depth examination of different lab users reveals that students who visited the lab had consistently higher satisfaction rates of confidence and self-perceived comprehension. Question seven of the survey asked participants to rate their confidence in their readings. Throughout the course of the semester, high lab users found the greatest increase, which was consistent with other questions. High lab users had an increase of 36%, low users saw only a 7% increase and medium users didn't see an increase or decrease in their confidence. Overall, self-perceived comprehension also was higher with high lab users. High lab users had an overall increase of 46%, medium lab users self-perceived comprehension rose 16% and low user's comprehension rose 17%. This study mirrors the success of previous research that also corresponds extra help with greater

success in the classroom (Chen and Wang, 2018; Chambers Cantrell, Correll, Clouse, Creech, Bridges, & Owens, 2010; Umbach and Wawrzynski, 2003). Since the Reading and Writing Lab was voluntary, students could come in for as little or as long as they wanted. While this appeared to work well for high lab users who both attended often and for longer periods of time, medium and low lab users did not see the same rise in confidence and self-perceived comprehension and the results of the study suggests it was because of the time they spent in the lab.

While longer visits in the lab were useful to students because they were able to dive deeper in their material, low lab users whose average was 53 minutes, had confidence and comprehension rates were not nearly as high as that of high lab users. This may be because unlike high users, low lab users did not move from item to another. Most low lab users focused on one main activity, regardless of how long they stayed in the lab.

However, medium lab users visited the more frequently than low lab users, but their length of stay averaged 33 minutes, the shortest length in time of all the lab users. Even though the sample size was the smallest, the findings suggested that medium users found themselves to move around from item to item more like high lab users, yet, their self-perceived comprehension rates were equal to that of low lab users; for some questions, the rates were actually lower. This may be an indication that not focusing enough time on different activities may yield positive confidence or self-perceived comprehension percentage. This could also mean there is a “sweet spot” for the length of time students work on material

High lab users had an average of 75 minutes per visit. During each visit, these

students would work on two, sometimes three different activities. Often, these high lab users would stay for a few hours and had an opportunity to devote an hour of time to each activity. I did not time how many minutes each user spent in each activity, yet it appears that consistently showing up and spending at least 30 minutes per activity really helped high lab users. High lab users also became leaders of their education journey and their best advocate. They learned what they needed to achieve, and they created their own schedule. At times, when others were in the lab, they would switch together or rearrange their activities, so they were completing it in a group. Other times, they would choose to work alone if they had an assignment due that week.

Increasing confidence and self-perceived comprehension appeared to work together. Students who felt more confident had a higher rate of self-perceived comprehension. They associated knowing more with feeling more confident about the material. This material helped students increase their success which drove them to frequent the lab more often.

### **Theoretical Implications**

The lab offered a resource to students to continue learning, even outside the confines of the class. Vygotsky (1962) recognized that learning is always occurring, and the social context is equally as important as the specific pedagogy that is occurring. Understanding the sociocultural theory implies that an educator knows students are always learning, but also that students realize they are always learning. Confirming this theory, the lab saw visitors coming and going at different times this semester. Some stayed longer and others had short visits. However, every time students were in the lab, they were working, studying, and learning through individual work, group discussions,

writing, reading, and one-on-one conversations with me. These findings appear to be an indicator of why there was an increase in confidence and comprehension from survey one to survey two and interviews, student confidence and self-comprehension increased throughout the semester.

Like Vygotsky, Knowles (1975) acknowledged learning is a process. However, Knowles theorized that adult learners, (or university students in this case) learn the best through Andragogy, or self-directed learning. This required a student-structured space where students could learn in their best environment. This student-structured environment created, in essence, a classroom that students designed. This type of learning occurred in the Reading and Writing Lab. Those who attended more appeared to become familiar with the lab and the people who attended. Those students reported the connections they built helped them work on group readings, group writing, and small group discussions. By coming in and focusing on material they wanted to and choosing which method they wanted to use in the lab, students may have created their best learning environment. As the semester continued, students appeared to better understand what their needs were and create the solution for that by coming to lab with a plan and controlling their learning environment. This independence may have created a better version of the student from the beginning of the semester. Students learned what they needed to do and were able to direct themselves on a path that increased their confidence and comprehension.

### **Practical Implications**

Throughout the semester certain users of the lab came more than others. These users appeared to have a higher increase in their confidence and self-perceived

comprehension at the end of the semester than those who did not visit as often. However, given that it was a smaller sample size, the lab may have not been the only reason their confidence and self-comprehension rose so high. However, the results of the findings suggest those that came to the lab more recognized, perhaps, more quickly than those that didn't attend as much, that they learned more in the lab. They were able to focus on performing different activities for different assignments at their own pace.

The findings suggest the greatest success was seen when students stayed for, on average, 60-minutes. During these 60 minutes they focused on different parts of their schoolwork. They discussed readings with others, worked on their papers individually yet alongside each other, and asked the instructor questions when needed. The 60 minutes allowed enough time to move around to different topics yet dive deep into the topics they were working on. The conversation that occurred led to a deeper sense of knowledge of the material, but also a deeper connection to the lab and kept the users coming back. Those who attended for a shorter period appeared to move around to different assignments, however the time constraints resulted in more surface learning than deeper comprehension. Low users, who stayed for a long period of time were able to dive deep into their work, but since they focused on writing, and doing it independently, they didn't connect with the lab as much as medium and high users.

### **Limitations**

Like all studies, there were limitations. The three main limitations to this study were: the small sample size, a lack of longitudinal data, and an on-going pandemic. The study size was small given the study occurred at a small university in the Midwest. Thirty-eight respondents filled out the survey, but only 25 attended the lab. Performing

another study that included interviewing those who did not attend the lab at (zero lab participants) would give the opportunity to examine why they did not use the lab and what could have been done to possibly have them attend. If they were interviewed in this study, it would have given me the opportunity to explore how not attending the lab may have affected their confidence and self-perceived comprehension. The smaller sample size in the different groups may have led to inconclusive results in the study. If the sample size was bigger, there may have been different results, altering the current results and conclusions. These insufficient results are not generalizable to the entire freshman class, the entire university or other universities, but only the sample studied. Having a larger sample size may have included different traditionally underserved populations as well. In many ways this convergent study was exploratory with its small sample size.

The data only covered one semester. The results may have been different if the students were followed their entire freshmen year. More users may have attended or those who were low or medium users may have become high users. Additionally, with the ongoing COVID-19 pandemic, some students dropped out because of health concerns. Others had to become virtual students halfway through the semester because of work requirements and limitations on the amount of people they could interact with. The lab was both virtual and in-person, but as students became virtual, the dynamic of the lab changed.

### **Future Research Suggestions**

This study provided an in-depth analysis of the success an extra lab can have for students who voluntarily want extra help. Future research could include multiple universities of different sizes and include a longer timeframe for data collection. The



current research provides an outline that could be utilized for other labs in other classes. Additionally, creating a longitudinal study could include more data about the success of a faculty run lab. This success could lead to more student structured labs where students become the masters of their studies. Future studies could explore virtual labs and how students who attend virtually connect with those in person. It may also be beneficial in future studies to study the length of each activity that participants work on and for how long.

### **Conclusion**

This study performed an in-depth analysis that examined how a faculty-led Reading and Writing Lab helped students taking a developmental English class. When students entered the lab voluntarily, they chose how to learn and what to work on. When students learned what skills they needed to work on the most, they were able to utilize aspects of the lab differently. Low users appeared to work on things independently and didn't communicate with anyone else in the lab. Even though they had less visits than medium users they stayed in the lab longer; however, they did not move around one from activity to the other. Since students were focused on one activity, they lost their chance to explore other activities that could help them raise their confidence and self-perceived comprehension even more. Medium users appeared to come to the lab more frequently than low users but stayed for short periods of time. Many of the medium users attempted to mimic the habits of the high users, but because they were not there as long, they could not dive deep into their work. This may have led to a glossed over understanding and the confidence and self-perceived comprehension results suggest that.

The students who saw the highest increase in their confidence and self-perceived comprehension appeared to spend their time in the lab focusing on understanding assignments and readings and practicing skills they needed to develop. High users spent the most time in the lab, possibly affording them the opportunity for deep conversations that led to greater understanding of material. By efficiently utilizing their time working on different skills, high lab users may have raised their confidence and self-perceived comprehension more drastically than medium and low lab users. The lab was designed to provide an equitable experience for anyone who attended, but those who stayed longer had the highest confidence and self-perceived comprehension results.

Like Vygotsky's (1962) and Knowles' (1975) theories suggested, students who attended lab wanted to further their education and academic skills. These students took charge of their learning experience and increased their confidence and self-perceived comprehension by attending the Reading and Writing Lab. Through attending lab and participating in student-structured activities, students appeared to gain a deeper understanding of their learning techniques and their academic skills. Others simply wanted to complete their assignment. This study exemplifies those who take control of their educational journey will see a rise in their confidence and self-perceived comprehension.

## APPENDIX A

### IRB Approval Memo

IRB #: IRB-FY2021-61

Approval Date: September 23, 2020



Federal Wide Assurance: FWA00009066

Sep 23, 2020 9:55 AM EDT

PI: Dolores Greenawalt  
CO-PI: Kyle Cook  
Dept: Education Specialties

Re: Initial - IRB-FY2021-61 Faculty led reading and writing lab

Dear Dolores Greenawalt:

The St John's University Institutional Review Board has rendered the decision below for Faculty led reading and writing lab.

Decision: Exempt

PLEASE NOTE: If you have collected any data prior to this approval date, the data must be discarded.

Selected Category: Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).

The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

Sincerely,

Raymond DiGiuseppe, PhD, ABPP  
Chair, Institutional Review Board  
Professor of Psychology

Marie Nitopi, Ed.D.  
IRB Coordinator

## APPENDIX B

### Informed Consent Form for Surveys

#### St. John's University Consent Form

##### Effectiveness of the Reading and Writing Lab – Survey Portion Dolores Greenawalt

Location / Key information about this research study: This study will take place under normal operating business hours of the Reading and Writing Lab located in the Learning Commons at Carroll University in Waukesha, WI.

Consent is being sought for this research study and your participation is voluntary. The purpose of the study is to assess the relationship between participation in the Reading and Writing Lab and levels of self-perceived comprehension confidence, and English class grades. You will be asked to participate in the Reading and Writing Lab during normal operating hours, take a brief survey at the beginning of the study and at the end of the study. The study will last for eight (8) weeks. Reasons you might choose not to volunteer for the study are it may take up too much time throughout the week. Reasons you might choose to volunteer for the study are improving your reading comprehension, increasing your confidence and feeling more comfortable reading and writing papers.

1. RESEARCH DESIGN / PURPOSE OF STUDY: The purpose of this convergent mixed-methods study is to assess the relationship between participation in the Reading and Writing Lab and levels of self-perceived comprehension confidence, and English class grades. The knowledge gained from this study will assess if a Reading and Writing Lab is critical to a university and if it would be beneficial to institutionalizing on campus.

2. DESCRIPTION/DURATION OF THE STUDY INCLUDING PROCEDURES TO BE USED:

The study requires a visits to the Reading and Writing Lab each week. All voluntary participants will be chosen from students in the ENG 140 classes. You will get an email from Dolores Greenawalt and a visit to your ENG 140 classroom explaining the study. If you choose to sign up, you will sign consent forms with Dolores Greenawalt, no later than September 19<sup>th</sup>. The study will run from September 21 – November 13<sup>th</sup>. You will take a short survey and participate in a short interview the first week of the study. Dolores Greenawalt will administer the survey electronically and will also interview students. Your interview will not take longer than 30 minutes. You will not be recorded on video or audio. Your interview questions will be kept confidential, and filed away after participation for one year in a locked cabinet. Any questions you may have will be answered any time during study. You will attend the Reading and Writing Lab (room 10 of the Learning Commons) for the entirety of the study. The lab will be open Monday and Thursdays from 12:00pm-3:00pm and Tuesdays from 11:30-2:30 so you can maximize your time spent there. You will participate in the lab activities just like all other

participants of the Reading and Writing Lab. This consists of meeting with the professor one-on-one, small groups, and reading sessions. You will receive extra help with paper comprehension, note-taking tips, textbook comprehension, and other questions you may have. At the end of the eight weeks you will take the same sent by email. The survey will be conducted through Qualtrics. If Carroll goes virtual, then you will attend the lab virtually like you would in person. You can also email the professor to ensure she is available for one-on-one appointments.

3. DESCRIPTION OF ANY PROCEDURES THAT MAY RESULT IN DISCOMFORT OR INCONVENIENCE: The study will occur during regular lab hours which may result in extra time spent on campus and/or the Learning Commons.

4. EXPECTED RISKS OF THE STUDY: Since the risk is minimal to none, there will be no compensation in the event of an injury.

5. EXPECTED BENEFITS OF THE STUDY TO THE PARTICIPANT: Possible benefits include extra help the lab normally provides for its participants. This includes English writing skills and reading comprehension skills. Other possible benefits include being a part of a community and meeting new friends.

6. OTHER TREATMENT AVAILABLE: N/A

7. USE OF INFORMATION COLLECTED FOR RESEARCH: Your information or samples that are collected as part of this research will not be used or distributed for future research studies.

8. PROTECTION OF SUBJECTS, PROCEDURES / USE OF RESEARCH RESULTS: The results of this study will help determine the effectiveness of the Reading and Writing Lab and assess the need for possibly institutionalizing the lab at Carroll University. All survey results and interview notes will be kept in a filing cabinet that I only have a key to in the basement of the library. All names will be converted to numbers to ensure confidentiality.

9. FREEDOM TO WITHDRAW: Your participation is completely voluntary. Refusal to participate will involve no penalty or loss of benefits that you are otherwise entitled. Your participation or refusal to participate will not be factored into your grade and participation in this study will not influence your course grade at all. You can discontinue participation at any time without penalty or loss of benefits that you are otherwise entitled.

10. COMPLAINTS:

*If you have any complaints about your treatment as a participant in this study, please call or write:*

Office of Academic Affairs  
Carroll University  
100 N. East Avenue  
Waukesha, Wisconsin 53186  
262/524-7364

11. RESEARCH SUBJECT/PARTICIPANTS' RIGHTS

*I have read or have had read to me all of the above. \_\_\_\_\_ has explained the study to me and answered all of my questions. I have been told of the risks or discomforts and possible benefits of the study.*

*I understand that I do not have to take part in this study, and my refusal to participate will involve no penalty or loss of rights to which I am entitled. I may withdraw from this study at any time without penalty.*

*The results of this study may be published, but my records will not be revealed unless required by law.*

*Any identifying information obtained in this study will be treated as confidential and will be safeguarded in accordance with the Privacy Act of 1974.*

*I understand my rights as a research subject/participant, and I voluntarily consent to participate in this study. I understand what the study is about and how and why it is being done. I will receive a signed copy of this consent form.*

12. SIGNATURES Have the research subject print his/her name, sign and date the consent form. In the case of a minor, have his/her parent or guardian sign. You, as the researcher, will also sign and date the form.

\_\_\_\_\_  
Participant Signature or Parent/Guardian Signature  
(please print)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Researcher Signature  
(please print)

\_\_\_\_\_  
Date

## APPENDIX C

### Informed Consent Form for Interview

#### St. John's University Consent Form

#### Effectiveness of the Reading and Writing Lab – Interview Portion Dolores Greenawalt

Key information about this research study: This study will take place under normal operating business hours of the Reading and Writing Lab located in the Learning Commons at Carroll University in Waukesha, WI.

Thank you for participating in the Reading and Writing Lab study. This consent is being sought for this research study and your participation is voluntary. The purpose of the study is to assess the relationship between participation in the Reading and Writing Lab and levels of comprehension confidence. You will be asked to participate in an interview that will last approximately 30 minutes.

1. PURPOSE OF STUDY: The purpose of the study is to assess the relationship between participation in the Reading and Writing Lab and literacy engagement, levels of self-perceived comprehension, confidence, and English class grades. The knowledge gained from this study will assess if a Reading and Writing Lab is critical to a university and if it would be beneficial to institutionalizing on campus.

2. DESCRIPTION OF THE STUDY INCLUDING PROCEDURES TO BE USED:

The study requires a thirty-minute interview on your experiences at the Reading and Writing Lab. Dolores will conduct all interviews. If Carroll goes virtual, then you will attend the lab virtually like you would in person. You can also email the professor to ensure she is available for one-on-one appointments.

3. DESCRIPTION OF ANY PROCEDURES THAT MAY RESULT IN DISCOMFORT OR INCONVENIENCE: The study will occur during regular lab hours which may result in extra time spent on campus and/or the Learning Commons.

4. EXPECTED RISKS OF THE STUDY: Since the risk is minimal to none, there will be no compensation in the event of an injury.

5. EXPECTED BENEFITS OF THE STUDY TO THE PARTICIPANT: Possible benefits include extra help the lab normally provides for its participants. This includes English writing skills and reading comprehension skills. Other possible benefits include being a part of a community and meeting new friends.

6. OTHER TREATMENT AVAILABLE: N/A

7. USE OF INFORMATION COLLECTED FOR RESEARCH: Your information or samples that are collected as part of this research will not be used or distributed for future research studies.

8. USE OF RESEARCH RESULTS: The results of this study will help determine the effectiveness of the Reading and Writing Lab and assess the need for possibly institutionalizing the lab at Carroll University.

9. FREEDOM TO WITHDRAW: Your participation is completely voluntary. Refusal to participate will involve no penalty or loss of benefits that you are otherwise entitled. Your participation or refusal to participate will not be factored into your grade and participation in this study will not influence your course grade at all. You can discontinue participation at any time without penalty or loss of benefits that you are otherwise entitled.

10. COMPLAINTS:

*If you have any complaints about your treatment as a participant in this study, please call or write:*

Office of Academic Affairs / 262/524-7364  
Carroll University  
100 N. East Avenue  
Waukesha, Wisconsin 53186

11. RESEARCH SUBJECT/PARTICIPANTS' RIGHTS

*I have read or have had read to me all of the above. \_\_\_\_\_ has explained the study to me and answered all of my questions. I have been told of the risks or discomforts and possible benefits of the study.*

*I understand that I do not have to take part in this study, and my refusal to participate will involve no penalty or loss of rights to which I am entitled. I may withdraw from this study at any time without penalty.*

*The results of this study may be published, but my records will not be revealed unless required by law.*

*Any identifying information obtained in this study will be treated as confidential and will be safeguarded in accordance with the Privacy Act of 1974.*

*I understand my rights as a research subject/participant, and I voluntarily consent to participate in this study. I understand what the study is about and how and why it is being done. I will receive a signed copy of this consent form.*



12. SIGNATURES Have the research subject print his/her name, sign and date the consent form. In the case of a minor, have his/her parent or guardian sign. You, as the researcher, will also sign and date the form.

\_\_\_\_\_  
Participant Signature or Parent/Guardian Signature  
(please print)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Researcher Signature  
(please print)

\_\_\_\_\_  
Date

## APPENDIX D

### Survey Questions (both pre and post)

#### CONFIDENCE PORTION

1. I feel confident in my writing skills.  
(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree
2. I feel confident writing a paper about a topic I'm not an expert on.  
(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree
3. I feel confident reading my textbook.  
(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree
4. I feel confident reading academic journals.  
(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree
5. I am confident finding information from a source to put in my papers.  
(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree
6. I am confident in identifying the main themes in textbook readings.  
(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree
7. I am confident in comprehending my assigned readings.  
(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree
8. I am confident in writing a paper.  
(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree
9. Overall, I am confident in my writing skills.  
(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree

#### COMPREHENSION PORTION

10. Writing papers comes to easy to me.  
(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree
11. I can write a paper about a topic I am not an expert on easily.  
(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree
12. Reading textbooks is easy to me.

(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree

13. Reading academic journals is easy to me.

(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree

14. Understanding academic vocabulary comes easy to me.

(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree

15. Inserting sources into a paper is easy to me.

(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree

16. It's easy to identify the main themes in a textbook.

(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree

17. I am confident in comprehending my assigned readings.

(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree

18. Overall, my self-perceived comprehension come easy to me.

(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree

## APPENDIX E

### Semi-Structured Interview Questions

Thank you for participating in the study.

1. How confident are you in your reading comprehension skills in your reading comprehension skills when you are reading a textbook?
2. How confident are you when you are reading an academic journal?
3. What interactions in the Reading and Writing Lab helped to increase your reading comprehension skills?
4. How did you feel about the textbook and in-class reading assignments throughout this semester?
5. What did you do in the Reading and Writing Lab that helped increase your textbook and journal comprehension?
6. What activities were most meaningful to you during the Reading and Writing Lab?
7. What did you like most about the lab?
8. What did you like least about the lab?
9. Is there anything else you would like to share about your experience with the lab?

Thank you for participating the Effectiveness of a Reading and Writing Lab study.

## APPENDIX F

### List of Themes, Categories, and Codes

Theme	Categories	Sub-Categories	Examples of Codes
Student Structured Learning Activities	Individual	Quiet writing	Getting ideas, creating outlines, focusing on work, diving deeper
		Quiet reading	Read quietly, read longer, took notes as read, created higher interest in book
		Focusing on material	Reading for deeper understanding, researching more, taking time to do it, choosing themes on own
	Group Learning	Small group discussions	Talked about more than class, let conversation naturally bring out questions, dove deeper, understood themes, question material, piggy-backed off of others' responses
		Group writing	Talked with other students, helped each other, bounced ideas off of each other
		Group reading	Read ideas out loud, talked to other classmate, helped ensure all themes were picked
		Move from activity to next	Not planned out so could move on item to next by themselves, took as much or little time on a topic, learned naturally what isn't understood
Lab Attendance	Lab Habits		Coming more created comfort, created routine, asked for more help
	Feeling Comfortable		Answer all questions brought up, not feeling scared about having wrong answer, Not anxious because not in classroom
	One on One with Instructor		Built relationships, created familiarity, felt safe

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