Web-Based Reading and Writing Instructional Tools: A Case Study of

Student Perception and Satisfaction


by
Rita Jean McClelland




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Chair of Committee: Sara McNeil

Committee Member: Mimi Lee

Committee Member: Margaret Hale

Committee Member: David C. Caverly




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**Dedication**

Many people have helped me reach this point in my life. I am grateful to each of these people for their involvement in my life's education. Thank you to my children J.P. Self, Brian Self, and Jessica Self. I know that I missed parts of your childhood as I struggled through my first two degrees. I cannot regret those early years knowing that you now have your own college degrees. Thank you to Corina Self, and Shane and Calah Voisin for being my cheerleaders in dark times. Thank you to Dr. Dawn Katz, Dr. Leigh Smith, Dr. Michelle Davis, Dr. Tracy Spencer, and Dr. Vicki Marshall for helping me navigate this degree's requirements. And, finally, a special thank you goes to my mom, Rachel, who began this journey with me so many years ago. Know that I have always been proud to be Rachel's daughter, Mom.

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**Abstract**

**Background**: Most textbook publishers now offer web-based instructional tools instead of a traditional, printed exercise book with their developmental reading and writing textbooks. This type of web-based reading and writing instructional tool is meant to offer individualized learning to students based on their skill level. **Purpose**: The purpose of this study is to discover the perceptions of Texas Success Initiative Assessment (TSIA) restricted students at a two-year, open-enrollment, technical college regarding the ease of use and usefulness of this type of web-based instructional. In addition, this study investigates the perceptions of instructors of underprepared college students about this type of instructional tool. Findings from this study gives college administrators a complete picture of the desirability of using web-based developmental reading and writing instructional tools in developmental reading and writing courses. **Methods**: During a sixteen-week semester, nine students and two instructors in an integrated reading and writing non-course based (NCBO) lab participated in one of four focus groups. Davis' Technology Acceptance Model (TAM) was used for this study's methodology because his 1989 set of statements is used to predict user acceptance of a technology in both the workforce and in education (Chutter, 2009). Focus group and individual interview questions were based on the set of TAM statements and include how easy students thought the tool is to use, how useful students thought it is. Individual interview questions of NCBO instructors focused on their awareness of what students think about this type of tool. Themes in the focus groups and the instructors' interviews' transcripts were mined for common themes after data collection. **Results**: This study found that students felt that a web-based reading and writing instructional tool required a large investment of their time, used difficult to understand language, and was repetitious.

Instructors of these students felt that students did not like the tool, but that the tool did, despite its negative features, help students improve their overall writing, though there was very little improvement in reading. Students did not perceive a web-based reading and writing instructional tool as easy to use, and even though they did think that what they learned from the tool improved their writing, they did not see it as useful to their education. **Conclusion:** This study finds that even though students feel that they learned specific grammar skills, but not mention anything they learned about reading skills, from a web-based reading and writing instructional tool, overall, they do not like it because it is difficult to use. This type of tool needs to be calibrated to the skills level of the lowest TSI scores. Instructors that use this type of instructional tool can improve students' perceptions of the ease of use and usefulness of this type of tool by using it to introduce topics, work through one or two lessons with students, and spend one-on-one time with students if they cannot complete an assignment.

*Keywords:* web-based instructional tools, web-based, instructional tools, Texas Success Initiative Assessment, TSIA, non-course-based option, NCBO, students, instructors, Davis, technology acceptance model, TAM, ease of use, usefulness, open-enrollment, technical college

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**Chapter I**

Going to college is no longer a luxury; it is a critical path for some people and increasingly includes people seeking jobs in fields that do not traditionally require any college, such as healthcare-related jobs, manufacturing jobs, and information technology-based jobs. These types of jobs have begun to require associate's degrees, in addition to on-the-job training. According to Ma et al. (2019) workers with higher levels of education are more likely to have earnings and more likely to work full-time year-round. Rolen (2019) states that according to the U.S Bureau of Labor Statistics that by 2026 occupations that will require some college credentials will grow faster than occupations that do not require any college for entry. At the same time as this growth in jobs that require college credentials occurs, the Texas Higher Education Coordinating Board (THECB) argues there will be many first-time students who will be underprepared entering two-year community colleges.

Texas requires incoming first-year students to take a placement test, Texas Success Initiative Assessment (TSIA), unless students meet specific exemptions, such as already having a degree from an accredited institution; completion of college-level English course at another institution; already completed TSIA requirements at another institution in the same state; active, reserve, or honorably discharged member of the United States military; enrollment in a certificate program of 42 credit hours or fewer; an ACT score of 23 with a minimum of 19 on the English test; an SAT score of at least 480 on the Evidence-Based Reading and Writing test; a TAKS score of 2200 in English/Language Arts with a Writing score of at least 3; or a STAAR score of 4000 on Level 2 of the English III test. Students can take the TSIA at hundreds of testing centers

across Texas, and their test scores place them in integrated reading and writing (IRW) classes and non-course-based option labs (NCBO) or college-level first-year composition classes.

Ehringhaus (2011) states that these changes signal the State's shift from summative assessment to formative assessment that gives students a snapshot of their academic reading and writing skills to know what to focus on in their developmental reading and writing classes. The Texas Higher Education Coordinating Board (2014) mandated in 2013 that all college and university campuses must link integrated reading and writing (IRW) courses with a mandatory non-course-based option (NCBO) as an intervention class to TSIA restricted students. The State also suggested that NCBOs, because they are intervention classes, may use nontraditional scheduling in computer labs and web-based interventions to help students improve their academic reading and writing skills with individualized instruction.

**Statement of the Problem**

Snyder et al. (2018) report that the number of students enrolled in any developmental course has been level since 2003, 19.2% (2003-2004), 20.0% (2007-2008), 19.7% (2011-2012), 19.2% (2015-2016). According to HigherEducation-Texas.gov, with 43% of all first-year undergraduates taking at least one developmental course, and 8% taking a developmental Reading/Writing course. The Skills Gap in U.S. Manufacturing: 2015 and Beyond, a report on a study of a wide range of industries in the United States, predicts that, "Not only is there a shortage today, but our study indicates there is a more pressing, longer term issue confronting manufacturers. The skills gap is widening, and over the next decade, 3.4 million manufacturing jobs will likely be

needed" (pg. 5). While 8% is only about 15,000 students at this time, the number of underprepared college students will rise even if the percentage stays level as more students may go to college for skills-related degrees and certificates. Bailey (2008) states that lack of success results in college students who are more likely to drop out of college in their first semester. Students are dropping out of college at a time when, according to Carnevale et al. (2016), a growing number of American jobs require workers to have at least some college-level education.

**Research Question**

Due to the increasing number of students seeking at least some college, we need to know more about how students perceive web-based reading and writing tools to improve their abilities. Therefore, the research question focused on in this study was:

> What are the perceptions of students of the ease of use and usefulness to their education of a web-based reading and writing instructional tool they are required to use in their NCBO lab?

**Significance of this Study**

Villar-Smith (2009) states that a major college textbook publisher claims that instructors using their products reported a 20% higher pass rate and an 8% higher retention rate in classes using their products than in classes not using it. Web-based reading and writing instructional tools are supposed to help students progress through their developmental reading and writing sequence quickly with individualized, online instruction. However, for those that do not learn with this instructional tool, it is not clear what students think about this type of instructional tool's ease of use and usefulness to their education.

According to Akyol and Garrison (2011), "Using grades to operationalize learning may not always provide the best results" (p. 238), with which to measure students' perceptions. Gearhart's (2016) study of McGraw Hill's LearnSmart, a web-based instructional tool, found that even though student performance did not significantly improve, students reported being satisfied with tool and that it was user friendly. Students' perceptions of everything they experience in college are directly tied to their attitude about college. If students are not satisfied with a course, a professor, or with an instructional tool, they may have a negative opinion of college, and be more likely to drop out. This study used case study methods to discover and explore first-year students' opinion of the ease of use and usefulness to their education of a web-based reading and writing instructional tool. Their perceptions of this type of instructional tool may indicate their satisfaction with the beginning of their college career and may affect the rest of their time in college.

**Definitions**

To help the reader understand my understanding of the terminology, this study's definitions are arranged from large perspective items to middle perspective items:

1. Southern Association of Colleges and Schools Commission on Colleges (SACSCOC): An accrediting agency of universities, colleges, and technical colleges in the southern United States.

2. Texas Higher Education Board (THECB): The governing body of institutes of higher learning in Texas.

3. Texas Success Initiative Assessment (TSIA): A placement exam for entering first-year college students required by Texas.

4. Technology Acceptance Model (TAM): An information systems theory that models how users accept and use technology.

5. Learning Management System (LMS): A virtual online classroom for assignments, instructional materials, grades, and syllabi.

6. Non-course Based Option (NCBO): One-hour lab course required for students in a three-hour IRW course.

7. Perceived Learning: Changes in learners' perceptions of skill and knowledge levels before and after learning experiences.

8. TSIA-restricted Students: Students whose TSIA scores place them in an NCBO lab, instead of college-level English classes. Other options may be placing students in other types of courses, such as history courses.

**Limitations of the Study**

One limitation of this study was the limited sample size. Only one section of NCBO, sixteen students, agreed to participate in this case study. The second limitation of this study was the duration of the study. This case study took place over only one sixteen-week semester rather than over two or more semesters. An unexpected limitation of this study was delivery. This study was initially planned as four face-to-face focus groups of four participants. Then, COVID-19 forced this study to online delivery after the first focus group, adding new challenges to the remaining three focus groups. Also, any changes in student perceptions of the web-based reading and writing instructional tool based on their grade in the course was a variable not examined in this study because students did not have final course letter grades at the time the study was performed. Also,

this study does not address any changes made to state-mandated assessments enacted by Texas after the beginning of this study.

**Summary**

This chapter introduced the background and research question of what this study seeks to discover, what NCBO students think about the ease of use of a web-based reading and writing instruction tool and its usefulness to their education. It presented a statement of the problem addressed in this study. That student perceptions of their college experience have become more of an indicator of their persistence to graduation at a time when more students are underprepared for college but need college to enter the workforce. This chapter also presented the significance of this study to the research. This study may add a deeper meaning to the current research about a type of instructional tool. An instructional tool that may be required by institutes of higher learning as more of them offer developmental education courses online because of student demand, or other outside influences like pandemics. The results of this study may help NCBO instructional designers and instructors, and publishers of web-based reading and writing instructional tools understand what students need to move with ease through their developmental education sequence and progress them to graduation.  It also presented the limitations of this study, that the data from one section of a course may not reflect a trend or predict graduation rates.

**Chapter II**

**Literature Review**

This chapter discussed research about underprepared incoming college students who saw, according to Garnjost and Lawter (2019), higher education as a pathway to a better job, which may lead to a better lifestyle. It discussed changes made by the Texas Higher Education Coordinating Board (THECB) to non-course-based offering (NCBO) labs' curriculum to address the needs of underprepared college students. It then discussed research into the Texas Success Initiative Assessment's (TSIA) history and implementation from 2000 to 2019. This chapter discussed TSIA and placement of students. It also discussed new instructional methods, especially technology-based methods, required by new TSIA standards. This chapter provided an overview of a web-based reading and writing instructional tool. This chapter also provided information about students' perceptions and how they affect students' academic performance and their progression through a college degree.

**Davis's TAM as a Predictor of Student Perceptions and Attitude**

Davis's (1989) Technology Acceptance Model (TAM) has been widely accepted as an effective tool for gauging user acceptance of technology in the workplace. According to Davis (1989), these perceptions influenced users' attitudes towards using technology, and influenced users' actual use of that technology. He directly connected user satisfaction with technology and whether it would be used.

Davis's (1989) TAM begins with External Variables and branches out in two directions, Perceived Usefulness to their education, represented by U, and Perceived Ease of Use, represented by E, then brings them together and runs them through Attitude of

Users, represented by A, and their Behavioral Intention to Use, represented by B, then culminates in users' Actual System Use. See Figure 1 below (Wikimedia Commons, 2020).

**Figure 1**

*Davis' (1989) TAM Flow Chart*
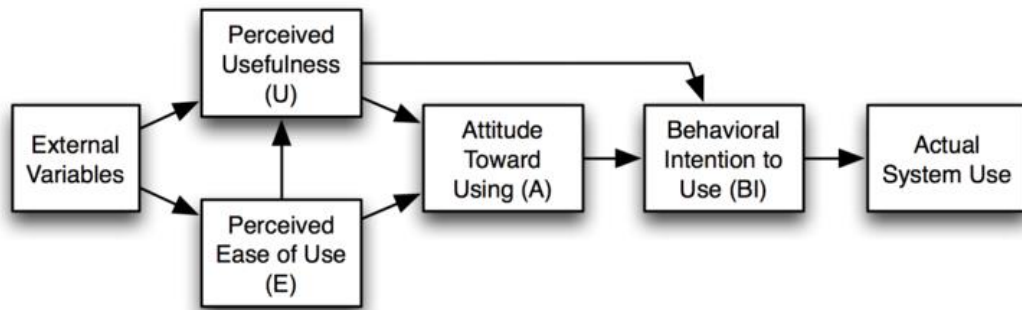


Davis's (1989) TAM took what employees thought about a new type of tool, computers, filtered it through how they felt about using it, looked at their intentions toward the new technology, and predicted their actual use of the technology. He used perceptions of and attitudes about computers in the workforce to determine whether people would use them or not. This information was important to employers and educators because Davis's (1989) TAM could aid them in three areas: (a) choosing computerized equipment that employees and students perceive as user friendly and useful to their jobs or education, (b) informing employers and educators what areas of use employees and students need to train in to be able to use computerized tools, and (c) addressing employees' and students' possible negative attitudes about using a computerized tool at work.

Davis's (1989) TAM was used in my study to predict whether students would use web-based instructional tools based on how easy it was to use and how useful they thought it was to their education. The participants in this study were adult college students who lived in an area with three two-years college campuses from which to choose. Student attitude often plays a significant role in student choice as the degrees a campus offers, especially in three campuses offering similar degrees.

Davis's (1989) TAM was chosen for this study because it has also become an important assessment tool in education as computers have moved into classrooms. Schools have used Davis's TAM to gauge students' perceptions and satisfaction using computers beginning in the early 1990s. TAM's core constructs of users' perception of ease of use and usefulness to their end goals have been selected as the perceptions that will be evaluated in my case study.

**College Students Underprepared for College-Level Reading and Writing**

The National Center for Public Policy and Higher Education (2010) found that despite completing a college-prep curriculum in high school, "Every year in the United States, nearly 60 percent of first-year college students" enrolled in two-year colleges, "discover that, despite being fully eligible to attend college, they are not academically ready for postsecondary studies" (p. 5). Allen and Seaman (2006) stated that online students are more likely to be studying at institutions that grant two-year associate degrees than four-year universities. Their 2016 data showed that online course enrollments made up 29.7% of all enrollments in fall 2015.

VanOra (2012) stated that students at two-year colleges are even more likely to lack essential reading, writing, and mathematics abilities than their peers who attend four-

year universities. The National Student Clearinghouse (2018) found that 2.5 million people attended college as first-time students in the Fall 2018 semester. The National Center for Education Statistics (2019) reported that from 2000 to 2017, college enrollment rates increased from "35 percent to 40 percent," showing a steady, upward trend in college admissions, which may also mean a steady, upward trend in the number of students who do not persist through their developmental education sequence and subsequently do not graduate from college.

Bailey et al. (2008) said that Texas was trying to retain students that tend to drop out early in their developmental sequence and who, therefore, never even begin their college-level classes for more reasons than their low reading and writing scores.

**Condensing the Developmental Reading and Writing Sequence**

Zientek et al. (2018) stated that reducing the time, and therefore the cost, to complete a college degree for students requiring developmental education was added to f the national discussion about how to help the group of college students least likely to succeed to graduation. Texas implemented reforms to its developmental reading and writing sequence to serve students' needs better. According to Rutschow (2019), Texas also wanted to speed up students' path to graduation by combining two courses that, as noncredit courses, did not count toward their college degrees. Research by Bailey et al. (2010) and Burdman (2012) found that students placed in traditional, semester-length developmental education classes, especially students who took multiple developmental classes, like reading, writing, and math classes in a semester, were more likely not to complete the sequence they needed to get into college-level classes.

Jaggars and Stacey's (2014) research showed that merging reading and writing classes worked well and that there were "positive effects on persistence and college-level credit accumulation for English language learners who were required to take both reading and writing developmental education instead of just reading instruction" (p. 4). The Lower Division Academic Course Guide Manual (2012) merged previously separate developmental reading and writing courses into one course and named it integrated reading and writing (IRW). The Statewide Developmental Education Plan (Texas Higher Education Coordinating Board [THECB], 2012) shortened the time students spent in separate developmental reading and writing classes to reduce the number of non-college credit classes students were required to take before moving to their college-level classes.

**Format of NCBOs**

Cassell (2004) stated that course objectives should focus on teaching students an awareness of their "ability to attend to and reflect on the nature, structure, and function of language" (p. 78) because self-awareness may lead to self-correction, which may help more students persist to graduation. With new learning outcomes, the Statewide Developmental Education Plan (THECB, 2012) moved from simple skill assimilation and task performance toward academic-level self-awareness of thinking, reading, and writing processes as outlined in the THECB's 2012 vision statement for developmental education. The THECB's (2018) report to the Texas' legislature showed its continued support for underprepared students with new initiatives, such as co-requisite first-year composition and NCBO classes.

Butt and Rehman (2010) found that teachers do an excellent job of improving students' satisfaction in higher education. Young and Bruce (2020) also found that

undergraduate students prefer face-to-face classes. Consequently, THECB mandated the

formation of an NCBO formatted as a once-a-week, one-hour lab with an instructor. The

main goal of NCBO labs was as an intervention course to give students extra time and

individualized help to understand anything they did not understand in their IRW class.

The new NCBO lab's syllabi were mandated to include the same ten learning outcomes

required by the Lower Division Academic Course Guide Manual (THECB, 2012) for

NCBO courses and focus on academic reading, thinking, writing, and research. Those

learning outcomes were:

1. Locate explicit textual information, draw complex inferences, describe, analyze,
   and evaluate the information within and across multiple texts of varying lengths.

2. Comprehend and use vocabulary effectively in oral communication, reading, and
   writing.

3. Identify and analyze the audience, purpose, and message across a variety of texts.

4. Describe and apply insights gained from reading and writing a variety of texts.

5. Compose a variety of texts that demonstrate reading comprehension, clear focus,
   logical development of ideas, and appropriate language that advance the writer's
   purpose.

6. Determine and use practical approaches and rhetorical strategies for given reading
   and writing situations. (p. 195)

7. Generate ideas and gather information relevant to the topic and purpose,
   incorporating the ideas and words of other writers in student writing using
   established strategies.

8. Evaluate the relevance and quality of ideas and information in recognizing, formulating, and developing a claim.

9. Develop and use effective reading and revision strategies to strengthen the writer's ability to compose college-level writing assignments.

10. Recognize and apply the conventions of Standard English in reading and writing.

**From Summative to Formative Assessment and from Paper to Computer**

According to the THECB (2018), new versions of the TSIA began focusing on diagnostics rather than performance and provided a "visual and numeric snapshot" (p. 33) of students' skills in reading, writing, and mathematics. Texas updated its college entrance tests in fall 2013, trying to get a complete picture of students' reading and writing level, and, also, simplified previous TSIAs that had been developed in conjunction with Texas' report, *Closing the Gaps: The Texas Higher Education Plan* (2005), and started in 2000. Newer versions of the TSIA offered several improvements over previous assessments of college students, such as the addition of an Adult Basic Literacy level. THECB (2014) stated that the new TSIA test, a computer-adaptive test, adjusted the difficulty of test questions based on students' responses, and provided more formative information in addition to summative information, so institutions could better advise and help students successfully navigate the developmental education process.

**Assessment and Placement of Students into NCBO Labs**

According to "Texas Success Initiative Assessment" (THECB, 2017), the TSIA's multiple-choice test questions aligned with Texas' College and Career Readiness Standards, were computer-adaptive, untimed, provided immediate results, and had a save and finish later option. Texas educators were provided with a summary of these standards

through an Overview: Texas College and Career Readiness Standards (THECB, 2009) which states that these standards ranged from writing and reading to speaking, listening, and research and focused on skills necessary to succeed in entry-level college courses. Texas' College and Career Readiness Standards mandated by the State legislature in 2006 defined a baseline of knowledge students needed to know to succeed in both college and skilled jobs after graduation from high school. In addition, the TSIA's "cut scores" (THECB, 2019) determined whether students would be placed in a developmental class.

"Texas Success Initiative Assessment" (THECB, 2019) listed cut scores to be used for student placement into a developmental sequence in reading and writing. Students who scored below 350 in reading skills, below 340 in writing skills, or a score inwriting that is below 4 in Adult Basic Education or below 4 on an essay were the guidelines for required students to enroll in IRW classes and their co-requisite NCBO classes. Students were placed in one of two course-level options based on their entrance test cut scores: a college-level first-year composition class or a developmental IRW class coupled with an NCBO.

**Web-based Reading and Writing Instructional Tools**

Once placement is made, students will use web-based reading and writing instructional programs. According to Saxon et al. (2016), typical examples of instructional technology were "supplemental grammar instruction . . . offered via computer software," "open labs . . . available for students needing extra help," and "an online lab component" (p. 34). Caverly et al. (2019) found that students are comfortable with technology for social interactions and were still learning how to incorporate digital devices into their academic lives. In his article, Fenton (2018) stated that LMS, like

Blackboard, Absorb, Schoology, and Google Classroom, were standard instructional tools in higher education classes. The Texas Developmental Education Plan (THECB, 2012) mandated that NCBO labs may use a variety of ways to help students focus on and improve their academic reading and writing skill, including tutoring, writing labs, and use of instructional technology. The technical college in my study chose to add a web-based reading and writing instructional tool in addition to its learning management system (LMS), Blackboard in its NCBO labs.

As early as Liou et al.'s (1992) study of students using computer-assisted language learning software found improved student performance in both grammar and writing tasks. Students who used traditional instructor-led, paper-based instruction showed improvement in grammar tasks only. Al-Samarraie et al. (2018) supported that users' perceptions of the usefulness of an instructional tool to their education was a core factor to their e-learning satisfaction.

According to Adams (2003), computerized interventions allowed individualized instruction and tutoring by adapting its curriculum according to feedback incorporated into the software. Karmi and Ahmad (2013) stated that students reported an elevated level of perceived learning and satisfaction in classes that used face-to-face instruction and online instruction. Transforming Developmental Education in Texas (THECB, 2014), stated that one thing NCBOs may offer is computerized interventions with contact hours based on students' needs rather than traditional institutional contact hours, which allowed targeted and accelerated instruction to help students improve their academic reading and writing skills.

The Texas Developmental Education Plan (THECB, 2012) called explicitly for supplemental instructional materials not used in a traditional classroom. Web-based programs for reading and writing instruction not only fall into categories of technology acceptable to the State, depending on whether an e-book is required, they may also be cost-effective for students. Web-based reading and writing instructional tools that do not include an e-book may cost less than $50, and the license may last a year, removing one financial barrier for students who must take the same NCBO lab twice.

Stahl et al. (1992) stated early on that the primary goal of computer instructional tools is to teach students strategies and tactics for reading and writing tasks they may encounter in their college careers, not just in one class. Elgersma (2005) found that students acknowledge that relearning specific skills such as proofreading, grammar, and usage is essential for academic success. Timmers and Veldkamp (2011) stated that web-based reading and writing instructional tools helped students focus on improving their academic reading and writing skills by asking self-awareness questions before they can submit answers to the exercises to go beyond one-faceted summative assessments that determine if students have achieved a learning objective. In addition, Tam (2017) said that web-based reading and writing instruction fosters metacognitive reading strategies that may enhance vocabulary skills, reading comprehension, and reading speed, which will also improve students' writing.

Arroyo-Giner (2013) found that with the individualized instruction provided and that they can control, students had many opportunities to gain motivation to correct their own mistakes as their perception of their competency changes. Collazo et al. (2015) stated that a feature that can change students' attitudes about learning from passive

information absorption to self-directed problem-solving-based learning was because cognitive instructional tools support diverse cognitive processing capabilities of learners.

Metzler-Baddeley and Baddeley (2009) stated that the best type of instructional tool should be like "adaptive training used in many industries" (p. 264) and should focus on instruction of what students do not know. Cobb (2003) stated that, "Metacognitive self-regulation strategies are the behaviors that learners display while engaged in a learning situation" and "these are the behaviors associated with planning, monitoring, and regulating the learning process" (p. 100). The web-based reading and writing instructional tool used in this study employed a metacognition report to present percentages of how many times students chose a correct metacognition option on the exercises and compared it to the incorrect percentage of times.

**College Students' Perceptions, Attitudes, and TAM**

Bean and Bradley (1986) stated that employee performance and attitude theories should be applied to college students. Deperlioglu and Kose (2013) found that the idea of a relationship between perceived learning and attitudes of college students is relevant because both groups have similar characteristics of organizational membership, interaction within an organization, and organizational oversight. According to Balci and Soran (2007), computers have become widespread in classrooms and have been successful because blended learning may yield better results than traditional and online learning. Students' academic achievements in classes using blended learning were better than expected, and student survey results also showed that students' attitudes were positive toward a blended learning approach. Sears et al. (2017) echoed that using

students' perceptions to measure program quality was around before computers started to make their way into classrooms at all levels of education.

According to Alsharida et al. (2021), Davis's (1989) technology acceptance model (TAM) was being used in more studies focusing on education, and that this increased the credibility of TAM. Davis's (1989) TAM measured users' motivation with three things: perceived ease of use, perceived usefulness to their education, and attitude toward using computer software to learn a subject. Davis (1989) stated that people tend to use or not use a system to the extent that they believed it will help them perform their job better or perform their assignments in the case of education. Davis's TAM was initially meant to study the use of new, computerized technologies in workplaces but has been used extensively to study technology used in education with the emergence of computers and the popularity of blended learning in both PreK-12 and higher education. Davis's original questionnaire included twelve questions with a Likert scale of 1 to 7, with one being Extremely Disagree and seven being Extremely Agree. Alsharida et al. (2021) stated that future uses of Davis's (1989) TAM may focus on mixed methods, including surveys and interviews, in collecting data. The use of mixed methods may help in better understanding the respondents' perceptions quantitatively and qualitatively.

Bean and Bradley (1986) linked interest with satisfaction and students' GPAs with critical affective and cognitive outcomes. Especially in a time when, according to Byoung-Chan et al. (2009), higher education was beginning to transition from sage-on-the-stage teaching to learner-centered education. A popular student satisfaction survey was the Community College Survey of Student Engagement (CCSSE), available through the University of Texas. Gruber et al. (2010) said that fueling this transition is student

satisfaction surveys higher education increasingly relying on as it sees itself as part of the service industry. Gruber et al. (2010) went on to say that student satisfaction was usually considered the result of a comparison between students' expectations and perceptions. Diep et al. (2017) added that interest in students' perceived learning, and attitude has gained "substantial attention from researchers" (p. 475).

Liou et al. (1992) found in their study of students using computer-assisted language learning that students' attitudes showed that they liked learning with computer software and thought it useful for language learning. According to Pike (1993), the relationship between perceived learning and satisfaction was well established, even though no one is sure how expectations and perceptions combine into student satisfaction. Harsasi and Sutawijaya (2018) stated that student attitude was critical in an online setting because student performance was related to the quality of online learning. Rios et al.'s (2018) research indicated that student satisfaction with technology was highest when technology promoted active engagement. Marx (2001) predicted that education would be driven by a demand for individualization of instruction to the student.

**Summary**

Chapter II provided a literature review that focuses on data about underprepared college students. It also explored Texas' condensing of the required developmental reading and writing sequence from two content courses to a single content course and co-requisite one-hour NCBO. This chapter also addressed the format of the NCBOs required by Texas' Higher Education Coordinating Board, including learning outcomes in the lab's syllabus. It also presented how students are assessed and placed into NCBO labs. This chapter addressed research about the outcomes of using web-based instructional

tools. Furthermore, it discussed students' perceptions and attitudes toward technology in

the classroom and Davis's (1989) Technology Acceptance Model background. Chapter

III will present information about the participants and setting, methodology, data

collection, data analysis procedures, and a discussion about the limitations of the

methodology.

**Chapter III**
**Methodology**

Johnson and Christensen (2004) stated that in qualitative research, human behavior was viewed as "fluid, dynamic, situational, social, contextual, and personal" (p. 31). Baxter and Jack (2008) and Leedy and Ormrod (2015) conjectured that qualitative research went a step beyond numerical data and delved into the why's and how's of the information more so than quantitative research reports. The purpose of this qualitative research study was to understand the perceptions of non-course-based option (NCBO) lab students at a two-year, open enrollment, technical college accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) in Texas about the ease of use and usefulness to their education of a web-based reading and writing instructional tool. Focus group interviews of students were the primary source of data for understanding what students at the campus in this study thought about the instructional tool's ease of use and usefulness to their education. Focus group interview data were collected in four one-to-six-person group interviews of the web-based reading and writing instructional tool students were required to use in their NCBO lab. Data gathered through the focus groups revealed what students using a web-based reading and writing instructional tool thought about the ease of use and usefulness to their education of this type of tool.

**Context for the Study**

This study took place on a two-year technical college campus with open enrollment in Texas. This campus awards certificates and Associate of Applied Science degrees in areas ranging from business to welding. This campus also offers an Associated of Arts degree that is the first sixty hours of a Bachelor's degree and is transferable to any

state-supported campus in the same southwestern state. This campus's developmental

reading and writing sequence includes two instruction levels, beginning and intermediate,

to help students improve their academic reading and writing skills, so that they can

progress to graduation. Suh et al. (2021) state that developmental education should be

justice-oriented and focus more on educators working with each other and students to

reform the system rather than fix students. Students do not need to be fixed; they need to

be helped.

It was required that students in this NCBO lab use a web-based reading and

writing instructional tool, and the grade on this tool's assignments was part of their

course letter grade. NCBO instructors monitored students' progress on the tool's website

and emailed students to let them know they were falling behind on their exercises.

Students who passed the NCBO and its co-requisite three-hour integrated reading and

writing class may then take any college-level class requiring passing state-mandated

assessment (TSIA) scores in a later semester. Whether or not students realized the long-

term effects of failing the NCBO lab, it is essential to students' college careers that they

are required to use a tool that they perceive as useful and user-friendly because it affects

their attitude toward the class and toward college.

**Review of Research Design and Data Collection**

*Research Design*

Singh (2017) states that the benefit of using a qualitative case study method to

gather knowledge of students' perceptions was that it allows for an extraction of detailed

and reliable perspectives of students. Hancock and Algozzine (2006) also say that student

narratives, mined for common themes that emerge from the focus group environment, can offer an idea of what students think about every aspect of college.

This study followed a qualitative methodology that included focus groups with underprepared college students who were required to use a web-based reading and writing instructional tool in their NCBO labs. Research focused on students' narratives of what they thought about the ease of use and usefulness to their education of this type of instructional tool. Interviews of NCBO instructors were added after the focus groups took place because only nine students participated in the focus groups rather than the sixteen students who originally agreed to participate in this study.

*Setting*

This study took place on a two-year college, open enrollment, technical campus accredited by the Southern Association of Colleges and Schools Commission on Colleges in Texas. This campus awards certificates and Associate of Applied Science degrees in areas ranging from business to welding. This campus also offers an Associate of Arts degree that is the first sixty hours of a Bachelor's degree and is transferable to any state-supported college or university in the same southwestern state. Besides the two-year campus in this study, this area offers two other community college campuses within a thirty-minute driving distance.

*Data Collection*

Data collection started in March 2020 and ended in June 2020. Study participants were students at a two-year technical college enrolled in an NCBO. All participants received an informed consent form that explained the purpose of the study, the expected time commitment for the focus groups and for the interview, possible risks (none)

associated with participating in the study, a statement of confidentiality, and contact information of the researcher and the researcher's mentor. Upon receiving the consent of the participants, the data collection started. Each focus group lasted 30 to 60 minutes. Focus groups were scheduled on three different days. All student participants were given randomly selected pseudonyms to protect their identity.

*Data Analysis*

Data analysis of the focus groups included both low coding and high coding of the groups' transcripts. It also included examining their transcripts for themes, especially themes common to all four groups, used to triangulate this study's findings and increase its results' validity.

**Effects of Covid-19 on Data Collection**

Scheduled focus groups were canceled two weeks in a row because the instructor had two family emergencies. One focus group was conducted face-to-face before this campus's spring break in mid-March 2020. The three remaining focus groups were rescheduled for face-to-face meetings after spring break. This campus's president announced the last Sunday of spring break that all classes and labs would be moving to online delivery until further notice because of the COVID-19 pandemic.

Three of four focus groups and the interviews were conducted online through Collaborate, Blackboard's web-based video and audio-conference tool. This change added several challenges to data collection in this study. The first challenge was technology. Participants had never used Collaborate in their face-to-face class and were unfamiliar with how it worked. Several participants also did not have reliable internet at home or access to a computer. During her focus group meeting, one student shared that

she was on her phone in the parking lot of a McDonald's restaurant near her house to use the free Wi-Fi.

Participants also did not know how to save their consent documents as .PDF files, sign them, and email them back. They also did not know how to attach a document to an email. Two of the online focus group transcripts were 45 to 60 minutes of instructing students on how to save a document as a .PDF, open it in the free Adobe PDF Editor available in this campus's email accounts, and then use the editor to sign their documents. Only one online participant was able to save, sign, and return consent paperwork without assistance.

The second challenge was communicating in an online environment. The face-to-face group participants were more engaged with each other. The first group talked over each other, interrupted each other, even asked questions of each other. The online groups did not engage in the same way. Online participants waited until the person speaking stopped speaking and did not build on each other's statements. They also did not ask each other questions and did not engage with each other as much as the face-to-face group. There is more silence between students' answers in the recordings of the online groups.

**Description and Selection of the Participants**

*Demographics*

The NCBO lab in this study initially had sixteen students. After moving to online delivery, seven of the sixteen students did not participate in the study or the class. It was decided to include instructor interviews in this study because only nine students participated in the focus groups. This study included exploring what two instructors who

teach this class at this two-year technical college think are students' perceptions of ease of use and usefulness to their education of this type of instructional tool.

Qualified participants in this study included NCBO lab students at a two-year, open-enrollment, technical college in Texas. Nine students participated in four focus groups. All the participants in this study were given randomly chosen pseudonyms to protect their confidentiality. There were four participants in the first focus group, Anne, Bob, Claire, and Donald. There were two participants each in the second, Eric and Frank, and third focus group, Gigi and Henry. The last focus group only had one participant, Ivan. The nine students were traditional college students, all were under twenty years old. The students were placed into an NCBO lab because they scored below college level in reading and writing. Of the nine participants, five students scored 0 on the TSIA essay portion, eight students scored 350 or below on the test's reading portion, and four students scored 339 or below on the test's writing portion. See Table 1 below.

The two instructors also interviewed were employees at the campus in this study, and each have more than ten years of experience in teaching on higher education campuses.

### *NCBO Lab Description*

Students attended a one-hour lab once a week during a sixteen-week semester. The lab class was a co-requisite of the three-hour IRW course students attended twice a week for seventy-five minutes over the same period. Students were required to complete twenty-five lessons in the lab with subjects ranging from critical reading to the writing process to grammar and punctuation. Students were expected to complete all the lessons, including a reading assignment, a set of questions based on the reading assignment, and a

set of instructional materials. Instructional materials included more reading assignments, a visual presentation of the topic, and a video, and students could switch between the instructional materials and the exercises until they scored at least 70% on the exercises.

**Research Question**

The research question guiding this study was:

What are the perceptions of students of the ease of use and usefulness to their education of a web-based reading and writing instructional tool they are required to use in their NCBO lab?

**Procedures**

*Student Focus Group Interviews*

Students were invited to participate in a focus group scheduled during their NCBO lab and were divided into four groups of two to six participants. Focus groups were scheduled to place in a meeting room downstairs from their NCBO lab, and students were not penalized for missing their NCBO lab while participating in a focus group. Students were asked to participate in this study during their face-to-face NCBO lab. Students who agreed to participate signed a consent form to be returned to the researcher. See Appendix C for the consent form. Students who did not consent to participate were not penalized and remained in the face-to-face NCBO lab. The consent form included the information that participants would be audio-recorded during their focus group session. Each session was transcribed, and the transcripts are being held in a locked file cabinet in a locked office. Transcripts of all interviews were studied for common themes.

**Addition of Instructor Interviews**

*Instructor Participants*

Two of the participants in this study were instructors of NCBO classes. One instructor was also the English department's program coordinator and decided what instructional tools to use in NCBO classes. The second instructor was an adjunct instructor with over fifteen years of experience teaching developmental reading and writing courses.

**A Program Coordinator.** The program coordinator was a content expert with advanced degrees in both English and Educational Leadership. This instructor also chose the instructional level of the exercises of the tool's website used in her class. She chose what lessons to assign, the instructional level, basic or advanced, and chose what questions were in each lesson. This study does not assume bias on the part of this instructor because even though this instructor worked with the instructional tool's publisher, this instructor also shared her frustrations with the instructional tool.

**An Adjunct Instructor.** The second instructor to participate in the study was also a content expert with a master's degree in English. She has over fifteen years of experience in teaching in both PreK-12 and higher education. She used the same instructional tool website developed by the program coordinator.

**Interview Procedures**

Instructors' interview data was collected individually. Interviews focused on what instructors believed are students' perceptions about a web-based reading and writing instructional tool's ease of use and usefulness to their education. Interview questions were loosely based on the questions asked student participants during focus groups.

Data analysis from the instructor interviews included examining the transcripts of both the instructor interviews for themes, especially themes in common with findings from the focus groups to increase the study results' validity.

Instructor interviews were 60 to 75 minutes long and took place on the same day. Instructor participants were recruited via campus email. Instructor interviews were conducted on June 29, 2020, from 3:00 pm to 4:00 pm and 7:00 pm to 8:00 pm using Blackboard's Collaborate.

**Trustworthiness**

Focus group interviews were chosen to study this group of student participants because it allowed participants to interact and respond to the interviewer and to each other. Individual interviews were chosen to study these instructor participants because they allowed the researcher to interact one-on-one in-depth with the instructors. Member checking was used to verify that the transcriptions accurately represented the participants' responses and emotions. Participants were allowed to correct errors and identify misinterpretations to reduce the possibility of researcher error and bias. Peer debriefing with two other qualitative researchers, Dr. Mary Sizemore and Dr. Tracy Spencer, ensured that transcripts were coded correctly.

**Summary**

This chapter discussed the following key findings: (a) NCBO students based their perception of ease of use on the level of language of the instructional tool and the time commitment required by it, (b) usefulness to their education was not a determining factor of student satisfaction with it, (c) student satisfaction with it revolved around the tool's progress bar, (d) students felt they learned more from their instructor than from the

instructional tool's website, and (e) NCBO instructors also found the website's language

level and time commitment prohibitive for students, and that students' writing did

improve over the sixteen-week course.

**Chapter IV**

**Findings**

Chapter 4 includes the following five parts. The first part describes the web-based

reading and writing instructional tool and its purpose in the NCBO lab. The second part

reports the study's findings of students' perceptions of the ease of use, usefulness to their

education, and overall satisfaction with what they learned from the tool. The third part

presents the instructor interviews added after the focus groups to add validity to this

study. The fourth part of this chapter presents themes common to the focus groups and

the instructor interviews. The last part of this chapter summarizes the findings of this

study and a preview of the next chapter's information. The research question of this study

was as follows:

> What are the perceptions of students of the ease of use and usefulness to their
>
> education of a web-based reading and writing instructional tool they are required
>
> to use in their NCBO lab?

**Description and Purpose of a Web-Based Reading and Writing Instructional Tool**

The web-based reading and writing instructional tool used in this study consisted

of four main instructional parts: instruction of the topic, presenting information about

commonly misused words and presenting students exercise questions based on

identifying commonly misused words. It also included remediation instruction, usually

text and video instruction, when students chose incorrect answers to exercise questions.

The instructional tool included reports of students' performance, such as missed

questions, on a separate Reports page students accessed by clicking a link in the left

menu.

Students chose to read the exercise instructions themselves or to have an onscreen avatar read the instructions to them. The avatar did not read the exercises to students. After they finished reading the instructional material, students were presented with a series of questions based on what they read. Students answered two types of questions. One question focused on the exercise, and the second question focused on their level of self-awareness of what they knew about the exercise's topic. See Figure 2 for an example of an exercise.

**Figure 2**

*Example of Reading and Writing Exercise Webpage*
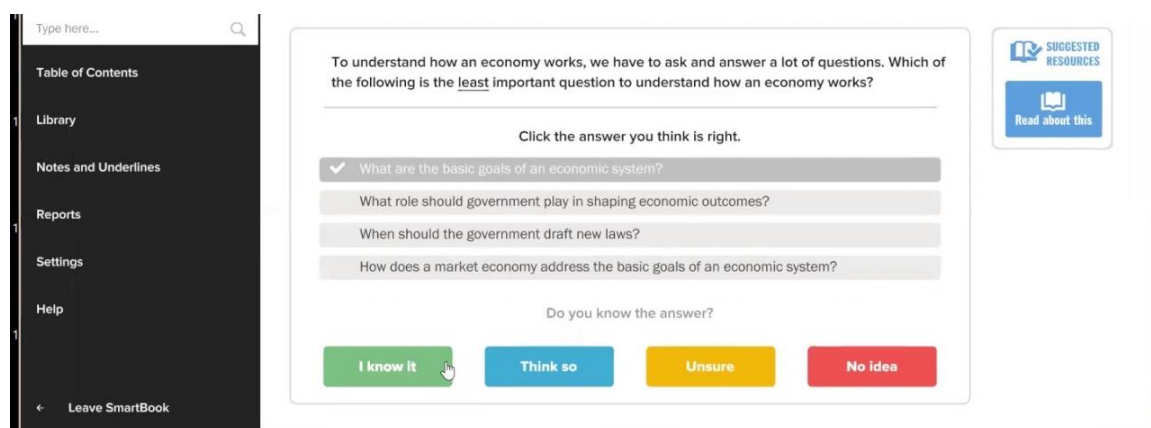


The website shifted students into the topic's remediation instruction after students scored below 70% on a lesson's exercises. Remediation instruction of the topic included text, but it was written in a reading level below the previous instruction and included multimedia presentations of the topic with a combination of pictures, charts, graphs, or videos. Students may also run performance reports based on their missed questions, which allowed students to focus on the questions they missed in the exercises.

*Aspects of the Tool that Addresses Underprepared Students' Needs*

This study's web-based reading and writing instructional tool was self-paced with an overall completion indicator, allowing students to work on their assignments as quickly or as slowly as they wanted. The instructional tool required students to set up a work schedule of at least two hours a week on different days when they first opened the website. The instructional tool's website collected student activity metadata and emailed to students notifications if they did not adhere to their schedule. The website displayed a completion indicator as a percentage bar for students to check their overall progress on the website.

This instructional tool also required students to be self-aware of their level of knowledge on each exercise question they answered. They could not progress to the next question even if they answered their current question correctly until they chose a knowledge awareness level. This choice forced students to think about whether they knew the answer they just chose, think they knew it, or were just guessing the answer. It checked students' self-awareness of their knowledge of grammar, punctuation, spelling, usage, reading with a purpose, and the writing process.

The instructional tool routed students into review and remediation when students did not pass at least 70% of the assignment questions. Remediation repeated the initial instructional materials, but the remediation materials were presented in a basic reading level, using fewer polysyllabic words, fewer words overall, shorter sentences, and multimedia to present the material in such a way that connected it to a variety of learning styles and a variety of reading levels.

Students' ability to run reports of their progress for themselves allowed them to focus their attention where they needed it the most, and it allowed them control over their learning. Missed question reports also helped students identify the topics they needed to pay attention to and control what they learn.

### *Goals for Using this Instructional Tool*

The main goal of using the tool in this study in NCBO labs was to individualize instruction using technology so that developmental students leveled up to college-level reading and writing outside of a classroom setting, as mandated by the THECB. The Texas Higher Education Coordinating Board (2017) gave NCBOs the option to add computerized interventions to help students improve their academic reading and writing skills. The campus in this study chose to use a web-based reading and writing instructional tool even though computers were not traditionally used with developmental students on this campus. See Figure 3 below for goals of NCBOs and how it was connected to the TAM model. Even though students in my study used the web-based instructional tool they were required to use, they did not find it easy to use.

**Figure 3**

*TAM Applied to Goals of NCBO Lab*
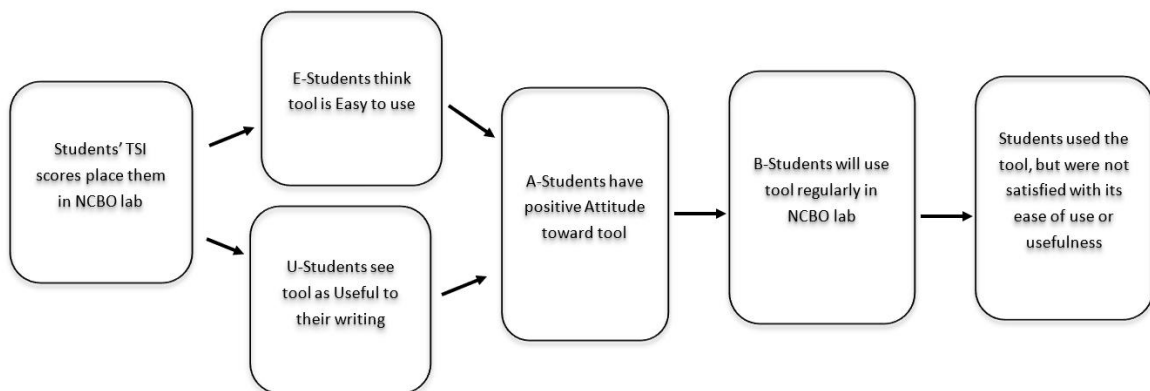
**Results of Focus Group Interviews**

*Identification of Focus Group Participants*

Focus Group #1 was the only group that met face-to-face and included Anne, Bob, Claire, and Donald. Focus Groups #2 met online in Blackboard's Collaborate and included Eric and Frank. Focus Group #4 met online and included Gigi and Henry. Focus Group #4 also met online and only had one participant, Ivan.

The research question that drove this study was: What are the perceptions of students of the ease of use and usefulness to their education of a web-based reading and writing instructional tool they are required to use in their NCBO lab. This research question explored the perceptions of developmental reading and writing students of the ease of use and usefulness to their education of a web-based reading and writing instructional tool they are using in their NCBO lab. Common themes that emerged from students' responses were as follows:

*Theme 1: Language.* Student participants and instructor participants perceived the tool's language was far above their reading level. Student participants focused less on reading literacy issues, like phonics, phonemes, and fluency. They focused solely on comprehension and vocabulary. Some reported that they did not understand or even know some of the words the website used. Most student participants shared their frustration about the tool's difficult language level. Bob, in Focus Group #1, commented on the website's language level. His tone of voice sounded frustrated, and he furrowed his brow when he talked about the website's language:

> Bob: I don't understand the words and . . . it won't let me go on forward until I
>
> like actually get the right answer and stuff. It's like too much.

Anne noted with the same frustration in her voice as the other participants that the instructional tool used words the instructor had never used in class:

Anne: Some words that she [the instructor] hasn't said, you know.

Claire nodded her head in agreement with Anne's statement about her difficulty understanding the website's language.

Focus Group #2's participants, Eric and Frank, did not express having any issues with the instructional tool's language level. Both shared that the website was easy to use:

Eric: It's self-explanatory.

Frank verbally agreed by saying: "Yes." Both participants, overall, spoke in a calm and matter-of-fact tone of voice when they answered the questions asked during their focus group.

In addition, Gigi and Henry in Focus Group #3 also talked about the tool's language level. Both of their voices sounded like a mixture of frustration and exasperation, and they focused on having to research words used on the instructional tool's website that they did not understand:

Gigi: I use my phone if it's a question, and it says the definition of something if it's in the passage and I've read the passage 2-3 times, and I still don't understand that message . . . I'll go back and read it again, Google that word . . . That way I can understand the definition, the meaning, and what the word means.

Henry: When I get stuck, I use Google as well . . . that's not right.

***Theme 2: Time Commitment.*** Student participants reported that the instructional tool was challenging to use because it was time-consuming. The two reasons students focused on are the extra time it took to answer additional questions they were assigned

because of one incorrect answer and receiving the same questions they had already missed multiple times.

All but one participant in Focus Group #1 spoke with frustration in their voices and facial expressions about the amount of time they spent answering more questions when they got one question wrong. The first participant to speak in this group, Bob, spoke in a voice that became more strident as he talked, and he furrowed his brow more as he said:

Bob: It's time-consuming . . . you cost getting it wrong sometimes. So like that take even more of your time.

In Focus Group #1, Anne stated that she felt like she spent more time on the instructional tool's website than the other participants. Her tone of voice sounded frustrated, and her voice became louder the more she talked about the time she spent completing exercises. She rolled her eyes while she spoke. She stated:

Anne: The fact that you have to really sit down for that one question that you got wrong and . . . you have to answer like 40 more from missing one . . . if I get that question wrong, I don't want to have to sit down for 40 more extra questions.

Claire and Donald, the other participants in Focus Group #1 supported Anne and Bob's comments using the same facial expressions that expressed frustration. The rest of this group's participants' voices also became strident and louder as they talked about the amount of time they spent in the instructional tool. Their facial expressions ranged from furrowed brows, Donald, to one participant, Claire, rolling her eyes, mirroring Anne's expression. They both sounded frustrated with the amount of time they spent on the website answering additional questions after getting just one question wrong:

Donald: You get it wrong, and then you're just stuck there for like . . . 20 minutes.

Claire: Yeah, shouldn't have to sit there for like 20 more minutes for that one wrong question.

Anne nodded her head in response to the comments made by the other three participants. Even though she physically agreed with the others' negative statements, she kept her facial expression neutral and her eyes on the other participants.

The members of Focus Group #2 consented to be audio recorded only. The second focus group's participants also stated that they did not like the instructional tool's repetitiveness. When asked what he did not like about the instructional tool, Frank stated his opinion in two words:

Frank: "The repetition"

Frank's voice sounded calm and quiet, but his tone of voice sounded frustrated. Eric agreed with Frank, and he also used a calm, low voice but, he also expressed frustration with the website's repetition.

One participant, Henry, in Focus Group #3, stated a specific amount of time commitment, twenty minutes, similar to what Focus Group #1 said, though his voice sounded irritated rather than frustrated with the amount of extra time he spent answering more questions because he got one answer wrong. His voice, sounding irritated, but sounded closer to his usual speaking level as he said:

Henry: It's a waste of time, pretty much. I mean, you get one question wrong, and then you're sitting there . . . 30 minutes with the same question.

Focus Group #3's other participant, Gigi, agreed with his statement with:

Gigi: Yes, it does that to me, too.

Her voice sounded surprised rather than irritated that someone else had the same experience with the instructional tool.

Focus Group #4 had one participant, Ivan. His voice was calm and unhurried during the entire interview. He expressed in a calm and quiet voice several times that the tool:

Ivan: Makes me tired and wears me out.

Ivan shared his experience with the instructional tool's repetitiveness. His voice was calm and tired sounding rather than frustrated when he said:

Ivan: It gets kind of repetitive sometimes. I think it should . . . be a little less repetitive and get different questions that may challenge people's minds for different things . . . you had the same question . . . And you have to answer that again and again.

Focus Group #1 also talked about the instructional tool's repetitiveness. Claire's voice became louder and higher as she talked about watching the same videos and getting the same questions multiple times when she could not get the answers correct:

Claire: Most of the times, they give you the same video. That's why I say I don't like it. Because I mean, yeah, you do -- it is like that when you get it wrong, you have to keep doing over, but I mean they give you the same question.

**Theme 3: Progress Bar.** This study's web-based reading and writing instructional tool used a progress bar to show students' progress through their assignments. Student participants reported dissatisfaction that the number of questions they answered correctly was not reflected in the progress bar on the instructional tool's website. At least one student from each focus group spoke about the progress bar with frustration, irritation, or

discouragement in their voices. In Focus Group #1, Anne and Bob expressed their opinions on how the instructional tool measures progress. Anne's tone of voice sounded frustrated while her facial expression reflected anger with her brow furrowed and her lips turned down when she said:

Anne: Even if you get it wrong, you shouldn't still have to sit there. You should still be able to go to the next section . . . if I get that question wrong, I don't want to have to sit down for 40 more extra questions.

Bob, also in Focus Group #1, sounded frustrated and had a furrowed brow and downturned lips, to match his tone of voice, but the expression in his eyes expressed discouragement rather than irritation when he said:

Bob: Yeah, you've got to get to 100 . . . when you get one question right . . . you get about 6% or something like that.

Claire, the third person in Focus Group #1, also exhibited frustration with the instructional tool's progress bar. She also sounded irritated and looked more discouraged than angry, mirroring Bob:

Claire: Pretty much . . . you get one right and say, It'll give you 6% or 7%.

Focus Group #2 stated the same type of experience with the instructional tool's progress bar as Focus Group #1. Frank's voice was quiet and calm, but also sounded frustrated when he said:

Frank: When you get a certain amount of questions, right, the percentage doesn't go up sometimes.

Eric explained why the progress bar does not progress to Frank. Eric delivered his thoughts in a calm voice, and Frank did not comment on Eric's explanation:

Eric: It's repeating it, and then it's telling you what you did wrong.

The one member in the fourth focus group, Ivan, also talked about his experience with the progress bar. His voice was quiet and tired sounding, as it was during the entire interview:

Ivan: Even if I get the answer, the answer it doesn't go. It has to go up like 5% or

like 5.5% or something.

***Theme 4: Student Satisfaction.*** Most of the focus groups' participants did identify specific topics they learned using the instructional tool in this study. Even though Focus Group #1 participants said they had learned something from the instructional tool, only one student, Anne, specifically stated what she had learned:

Anne: Comma splices and stuff like that . . . pronouns and stuff like that.

No one else in this group stated that they had learned anything specific from the instructional tool. Bob stated in a confident tone of voice that he learned more from the instructor than the instructional tool.

Bob: I feel like I've learned more with the professor . . . I was trying to learn from

the video because it was trying to teach me . . . but I could never understand.

The rest of Focus Group #1, the only face-to-face group, agreed that the instructor was whom they learned from, not the instructional tool. The participants not only agreed with Bob's statement but gave reasons they think they learned better from the instructor than from the required instructional tool. All of them spoke with confident-sounding tones of voice. The more they talked about their instructor, the more excited their voices sounded. This focus group's participants expressed more satisfaction with their interactions with the instructor than with the instructional tool. They said:

Anne: She break it down to us.

Bob: Yes, she break it down. So like I rather have a teacher explain it and break it down.

Claire stated in a confident-sounding tone of voice that she learned more from the instructor:

Claire: No, it's Dr. Blue.

Bob agreed with Claire's statement, adding in rueful sounding voice that he did not:

Bob: Really learn anything from the instructional tool, to be honest.

Claire and Anne stated a second time that they learned from the instructor and not the tool:

Claire: This was definitely not [the instructional tool]. It was Dr. Blue.

Anne: I think it's Dr. Blue too . . . she makes sure that we understand, like she want us to get it.

Donald did not vocalize his agreement. However, he nodded his head as if in agreement when the other focus group members stated that they thought they learned from the instructor rather than from the instructional tool. Overall, this focus group's voices, and facial expressions expressed excitement and happiness, higher-pitched tones, and smiles, when talking about their instructor.

Focus Group #2 spoke about the instructional tool in a calm and encouraging tone of voice, as they acted as if they liked interacting with it better than the first focus group. Eric stated that he had learned about:

Eric:  A lot with grammar. And it's taught me to look more into the text a little

more and really understand it . . . paying attention more to like the paragraphs and

the text . . . what's really helped me the most personally is like the colons and

semicolons, and when to put those.

Frank voiced that he learned about "colons" also.

This focus group had two participants, Eric and Frank, and Eric agreed

with most of what Frank said. It did not sound as if Eric agreed with Frank because he

followed Frank's lead or was not engaged in the questions. His tone of voice did not

sound conciliatory or irritated by the questions. He genuinely sounded like he agreed with

Frank's statements and observations and did not need to develop those comments further.

Neither participant in the second focus group expressed any opinion about the course

instructor.

Focus Group #3 was also a two-person group. Gigi is only one of two participants

in all of the focus groups who seemed to like the instructional tool used in this study,

saying in a confident tone of voice at one point that she:

Gigi: Liked everything about it.

However, even she talked about the course instructor in a happier tone of voice

than when she talked about the instructional tool. Both Gigi and Henry stated general

areas in grammar they learned from the instructional tool. Gigi also stated what she

learned about writing beyond grammar and punctuation:

Gigi: It helped me write and become a better writer, especially when it comes to

writing essays or using first second person. And I think that that helped me

become a better writer, a more profound writer.

Henry: I think it helped just a little bit with the punctuations and stuff.

Both focus group participants also expressed more satisfaction with the instructor's teaching than with the website's instruction. Both participants spoke about the instructor with enthusiasm. Gigi said that she learned from the instructional tool because the instructor had taught the same topics the instructional tool did:

Gigi: What I'm learning from [the instructional tool] is really basically whatever Dr. Blue had taught us from day one up to this point is basically, you know, on [the instructional tool] is just more elaborate

Henry responded to the question of what he thought learned from the instructional tool with a question. He asked:

Henry: It's a good question. What I'm learning from the instructional tool?

His tone of voice was musing and thoughtful rather than scornful and sarcastic. However, he also stated in a confident-sounding tone of voice that he had learned only what the instructor had taught him:

Henry: Stuff that Dr. Blue has given us and stuff like that. And I mean, yeah, that's pretty much it.

Focus Group #4 is the group with only one participant, Ivan. He stated that he specifically learned about:

Ivan: Run-ons and comma splices.

Ivan did not express satisfaction or dissatisfaction with what he learned from the instructional tool and did not mention the instructor during his interview. His tone of voice was calm, quiet, and he sounded tired during his entire interview.

**Results of Instructor Interviews**

*Description and Initial Experiences of Interview Participants*

The instructors who were interviewed used the web-based reading and writing instructional tool in their NCBO lab at this Texas two-year technical campus. They know from TSIA scores that the students in these classes were underprepared for college in reading and writing. Both instructors assumed that students would be reviewing information about reading and writing that they learned initially in PreK-12, but that was not what Ms. Red experienced. She recognized that students in her class:

> Ms. Red: Learned some of the pragmatics . . . of English. They're learning even something simple as identifying parts of speech, of noun-verb agreement. So many of these basics are missing when they come to us. They're just missing even main ideas supporting details, all of these things.

Dr. Blue also thought that these students, as digital natives, found working with a web-based instructional tool a more familiar method of refreshing their knowledge about reading and writing than working with lectures and handouts in class. She stated, in a confident tone of voice, that:

> Dr. Blue: I like the fact that it's an online learning tool that makes grammar studies number one, available, accessible, organized, and mandatory. I think that online adaptive learning environment specifically for grammar . . . it's really important for students to have that.

Dr. Blue also stated in the same confident tone of voice that she expected students' different learning styles would be addressed in the online environment:

Dr. Blue: The audio learners, the visual artists, the kinesthetic learners, everyone

is being tapped into so that whatever their learning style may be, which hopefully

they're getting in touch with, through the online class and through some of the

things that we teach them at the beginning of the semester, they can figure out

how to use the program in such a way that each one uses it differently, but they

use it the way that helps them benefit the most individually.

### *NCBO Instructors' Opinions of a Web-Based Instructional Tool*

The reality instructors faced was that just because students were digital natives on

their cell phones did not translate into being skilled using a web-based instructional tool.

Even the instructors found the website less than user-friendly. Dr. Blue stated in a

frustrated voice that she though the number of exercise questions for students was too

many and time-consuming and added a barrier to students already struggling to complete

their assignments.

Dr. Blue: I thought it was cumbersome.  And it was like, there's so much to go

through.  Well, it was voluminous, so that the students just were not even

knowing which way to go.  It was too much, too much.

She also shared that she, too, did not understand some instructions on the website.

She focused on comprehension rather than vocabulary.

Dr. Blue: I had to read some instructions three or more times before I understood

what [instructional tool] was asking for.

Ms. Red found that the instructional tool used in this study did not mesh well with

the school's learning management system, Blackboard, causing students to fail exercises

they had passed. Ms. Red stated in an exasperated tone of voice that the tool did not

populate her Blackboard grade book, and she stated this information twice. In the same exasperated tone of voice, she also said that the problem was intermittent and forced her to spend more time checking every grade instead of focusing on lesson plans.

> Ms. Red: I don't like sometimes that when students complete an assignment, it doesn't always automatically populate in gradebook, sometimes we have to go back, and students have to show me that it has shown that they have completed their assignment, but it has not populated the grade, it might not have given them credit for it, sometimes that can be frustrating.

**Themes Common to Focus Groups and Instructor Interviews**

The interview of NCBO instructors explored their perceptions of what students think about the web-based reading and writing instructional tool required in their classes. Interview questions focused on what instructors knew about students' perceptions of an instructional tool used in their NCBO courses. Themes common to both the focus groups and the instructors' interviews were as follows:

*Theme 1: Language*

Dr. Blue stated that she also struggled with the website's language level. Her tone of voice reflected surprise and her facial expression expressed mild disbelief, as she raised her eyebrows while making this statement:

> Dr. Blue: Frequently, I have read the question three times. There have been many incidents like that.

Ms. Red, sounding and looking calm, postulated that students had this issue with the tool because the website was written above students' level of language:

Ms. Red: It's the complexity of the language because we're working with

developmental education students. And if you're working with developmental

education students, then the language needs to be at that level of learning.

### Theme 2: Time Commitment

Dr. Blue stated that how students used the instructional tool increased the amount

of time they had to spend on the website, but that is good because repetition helped them

learn. Dr. Blue's voice and facial expression were calm and self-assured when she said:

Dr. Blue: They're probably going to go straight to the first question. They may

watch the introductory videos, some of them may, but I'm not sure all of them

will. Some of the students will click on the help task, read the additional

instructions, go back, and answer the question correctly because they have

additional instructions. And it also directs them to the textbook that's available

online, where they can actually go and read concepts from the textbook and the

eBook.

Dr. Blue agreed with students' perceptions that the tool was repetitive, but

remarked in a calm, sure voice that the tool's repetition was facilitating their learning:

Dr. Blue: You have to repeat it until you get it right . . . repetition does help with

learning.

Ms. Red and Dr. Blue reported that students overall progress was essential to the

students and that they closely monitored it. Ms. Red stated, sounding amused, that

students were:

Ms. Red: Mindful of the questions that they missed, they are mindful of that and

sometimes they take notes on the ones that they've missed . . . they look at that

link that shows the completion in their grades, make sure they have been given

credit for it.

Dr. Blue shared in her calm voice students' reactions to the missed question report

and how students used it to move their progress bar closer to completion of the exercises:

Dr. Blue: They were very excited when I showed them the missed questions

report. So, I think they use it to go back and look at questions they've missed and

learned that and focus on that area so that they can get their percentages to move

forward and get through the programs.

### *Theme 3: What Instructors Think Students Learned*

Instructors identified perceived areas of improvement in their students' reading

and writing after using the instructional tool. Dr. Blue stated in a firm and confident tone

of voice that:

Dr. Blue: My students are probably learning grammar rules and sentence structure

and how to avoid run-on sentences, and comma splices, and subject-verb

agreement, and pronoun usage, and comma rules.

Dr. Blue spoke in a confident tone of voice, made good eye contact with the

researcher when she made this statement and leaned into her camera to list specific

grammar skills students had learned.

Ms. Red also identified a list of grammar skills she thought students learned from

the instructional tool. She identified parts of speech, such as noun-verb agreement. Her

voice started to sound less sure as she continued discussing what she thought her students

had learned from the instructional tool. She also leaned back in her chair, whereas before,

she had leaned toward the camera, but she maintained eye contact the entire time. She added that students learned writing skills, such as:

> Ms. Red: I can see growth even in the cohesiveness of ideas and formulating paragraphs, sticking to the same – like the topic sentence of each paragraph, starting from a thesis statement and then each paragraph having your topic and speaking to that topic. I think even in the structure of their sentences, structure of their writing.

**TAM Applied to the Findings in My Study**

Students expressed the common perception that the web-based instructional tool was difficult to use. Students stated that the tool difficult to understand and, therefore, difficult to use. They did not express that it had any value to their education, even though most of them stated specific skills they learned from the tool, and most of them had a negative attitude toward the tool. They still used the tool regularly, however, they only used it because it was counted as a grade in their NCBO lab.

**Figure 4**

*TAM with Findings of NCBO Labs*
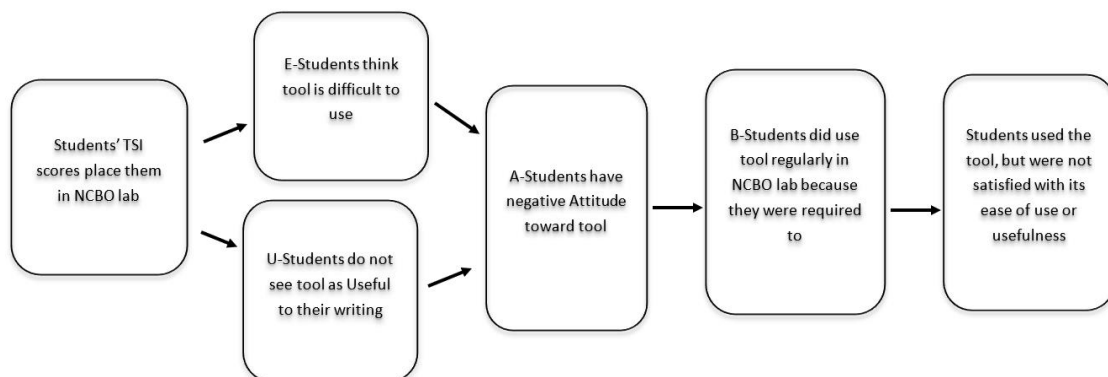
**Summary**

  Chapter 4 presented a description of the web-based reading and writing instructional tool used in this study, specifically its purpose, what part of it addressed learner needs, and reasons for using it in an NCBO on the campus in this study. This chapter also included additional findings from online interviews of NCBO instructors added after only nine students participated in the four focus groups. This chapter also presented results with themes common to both the focus groups and the interviews. Chapter 4 also restated Davis' (1989) TAM with outcomes from student interviews. Chapter 5 will discuss the findings of the study and the conclusions.

**Chapter V**

**Discussion**

The purpose of this study was to investigate NCBO students' perceptions of the ease of use and usefulness to their education of the web-based reading and writing instructional tool used in this study using interview questions loosely based on Davis's (1989) TAM questionnaire statements. This chapter discussed the following key findings: (a) NCBO students based their perception of ease of use on how easy the language of the tool was to understand and the time commitment required by it, (b) usefulness to their education was not a determining factor of student satisfaction with it, (c) student satisfaction with it revolved around the tool's progress bar, (d) students felt they learned more from their instructor than from the instructional tool's website, and (e) NCBO instructors also found the website's language level and time commitment prohibitive for students, and that students' writing did improve over the sixteen-week course. This chapter also discussed the perceptions of NCBO instructors interviewed after the study moved online and lost seven participants in the focus groups.

**Educational Value of the Study**

Corcoran et al. (2004) stated that student-led narratives increase educators' understanding of student perceptions of instructional tools. This study provided information about what students at this Texas two-year, open-enrollment technical college thought about the ease of use and usefulness to their education of web-based reading and writing assignments. This data gave NCBO course designers and instructors at the campus in this study information about whether this is the best type of web-based instructional tool for this campus to use in NCBO labs. This research also helped inform

other institutes of higher education of the advantages and disadvantages of this type of instructional tool from the primary users' viewpoints.

**Interpretation of the Key Findings in Context of the Literature**

*Students' Perception of Ease of Use of a Web-Based Instructional Tool*

Karmi and Ahmad's (2013) study found that students reported a high level of perceived learning and satisfaction in classes that used blended learning, which uses face-to-face instruction, and online instruction. Balci and Soran (2007) found that the addition of technology to traditional face-to-face courses can raise the quality of education by allowing individualization of instruction with a web-based reading and writing instructional tool. Balci and Soran also cautioned that if an instructional tool does not fit students' needs, they will be less likely to use it. Lack of student acceptance was especially true if the instructional tool uses language above students' reading levels. Al-Samarraie et al. (2018) supported that users' perceptions of the usefulness to their education were a core factor to their e-learning satisfaction. If an instructional tool was challenging to use, students were more likely to perceive it as not user-friendly and not useful to them.  Therefore, they were more likely to be dissatisfied with what they thought they learned from it, even if they perceived specific skills that they had learned from it.

Students expressed that the instructional tool's time commitment was unnecessarily long. Several students in different focus groups stated that they spent an extra twenty minutes on remediation and more exercises when they missed one question. They stated that more questions and repeated questions did not help them. According to Timmers and Veldkamp (2011), detailed feedback hindered rather than helped learning:

The results show that when the amount of elaborated feedback grows for incorrectly answered questions . . . the relative attention paid to the feedback decreases. These findings imply that task difficulty should be taken into consideration during the development of assessments for learning (p. 929).

***Students' Perception of Learning from a Web-Based Instructional Tool***

A study of Pakistani higher education by Butt and Rehman (2010) found that: Teachers' expertise is the most influential factor on the students' satisfaction, whereas courses offered, and learning environment are next important factors and classroom facilities is the least important factor among all the variables. This means that teachers' expertise . . . do a good job of enhancing students' satisfaction in higher education. (p. 5450)

Students stated that they had learned grammar and punctuation with this instructional tool and that, in general, their writing had improved in language, coherence, and unity by the end of a sixteen-week semester. None of the students in my study stated that they had improved their reading skills. The first focus group, the only focus group that met face-to-face before Covid-19 caused the campus in this study to close in March 2020, responded that it preferred direct instructor intervention in conjunction with a web-based reading and writing instruction tool. They thought that instructor intervention made the instructional tool's website easier to use, more valuable to their writing and were more satisfied with what they thought they had learned from the tool.

Student satisfaction revolved around the instructional tool's progress bar. The students in this study did not seem to use the instructional tool like the students in Timmers and Veldkamp's (2011) study to improve their academic reading and writing

skills by asking self-awareness questions. Instead, the students in this study focused on one component of the tool's website, its progress bar, with the single end goal of increasing their percentage. They also did not seem to use Tam's (2017) metacognitive reading strategies to improve their reading skills. The only aspect of reading skills they focused on was vocabulary. They expressed the most dissatisfaction with how slowly the progress bar reflected their progress after they got one question wrong. They did not express any dissatisfaction with how they used the instructional tool.

***Instructors' Knowledge of Students' Perceptions***

Finally, the instructor interviews explored instructors' perceptions of what students thought about the instructional tool's ease of use and usefulness to their education. The instructors in this study reported that they also found the language on the website difficult to understand. One instructor shared that she had to read some instructions and exercise questions several times. Their opinion of the repetitiveness of the questions in the exercises differed from the students' opinions. The instructors stated that the instructional tool was repetitive but believed the repetition of missed exercise questions was a viable learning tool that helped students improve their skills. Instructors shared that they saw improvement in their students' reading and writing skills from the beginning of the class to the end of the semester. They also shared that they thought most students knew that they learned something important from the instructional tool. Instructors expressed the same opinion as the students in my study. They found parts of the instructional tool difficult to use. Instructors also found the language difficult to understand.

**Limitations**

A limitation of this study was the smallness of its sample size. Only nine of the expected sixteen students participated in this study. Seven students did not transition online after the campus closure in this study by the COVID-19 pandemic. The two instructor interviews were added after this study was moved from face-to-face to online focus groups because of the severe reduction of student participants. This study's second and unexpected limitation is that it started as face-to-face focus groups and ended as one face-to-face focus group, three online focus groups, and two online interviews. A third limitation of this study was that it focused on one publisher's web-based reading and writing instructional tool.

**Significance of the Study**

As TSIA-restricted students continue to enter college, educators must find ways to help them reach college-level reading and writing skills. According to Bailey et al. (2008), underprepared college students drop out early in their developmental education sequence. These students must be given every chance to succeed in their first semester to graduate. It was easy to require students to buy and use a web-based reading and writing instructional tool, thinking it will, according to Clay-Buck and Tuberville (2016), help students overcome a lack of knowledge in reading and writing. However, if that tool was perceived as too hard to use, and students think it was useless to their education, they will not use it. This study contributed to the mission of helping developmental students by providing these insights: (a) students' perceptions of the ease of use and usefulness to their education of web-based reading and writing instructional tools, (b) instructors' perceptions of what students think about this type of tool.

This study's significant contributions included sharing the voices of students required to use this tool and the instructors who required students to use it. Various insights into this type of instructional tool's language and time requirement contributed to the knowledge base of web-based reading and writing instructional tools. Instructional strategies that NCBO instructors used to respond to students using this type of instructional tool could be valuable references for the current and the next generation of developmental reading and writing instructors. In the meantime, the pedagogical challenges reported in this study may serve as a reference for instructors when they review web-based reading and writing instructional tools to use in their NCBO labs.

**Implications for Practice**

According to Young and Bruce (2020), students, especially first-year students, satisfaction is significantly higher for face-to-face classes, possibly because of social presence, classroom interaction, and content learning. Garnjost and Lawter (2019) concluded that students see:

> Higher education as a pathway to a better job and are highly risk adverse to any class which will jeopardize their success in school and their employability . . . students favored project-based learning classes as those classes typically teach employable skills with minimum risk and an acceptable level of challenge. (p. 273)

This study uncovered one of the key issues with web-based instruction. Web-based instructional tools have not yet moved in using artificial intelligence (AI) to individualize instructions to students. To be genuinely individualized, the tool's AI would

have to be able to recognize what students understand and to answer their questions in language students understand.

The only way students can be instructed this way was with an instructor who can answer their questions when they ask them, and that would answer those questions in diverse ways students could understand. Instructors were still crucial to the learning process because they were in the classroom or online, answering students' questions in ways that a website cannot.

Students spent a significant amount of class time in front of a computer doing exercises that they could not connect to their writing because they had not yet learned how to make those connections. Rather than using a computer-based reading and writing instructional tool, instructors should structure lab time like a writing seminar with the class divided into goals, such as previewing the day's reading assignments, planning for the day's writing, implementing the plan on a computer, and checking the day's reading comprehension and writing assignments.

**Recommendations for Future Research**

There are many possibilities to extend this study's findings to tell the entire story of what students think about a web-based reading and writing instructional tool. This study could be replicated on this campus with a larger group of participants over multiple semesters, rather than just one semester. This study could also be replicated on a community college campus focused on transitioning students to four-year universities. Also, rerunning the study with only face-to-face focus groups may reveal additional findings. This study could also be replicated with a different publisher's web-based reading and writing instructional tool.

It is recommended that the data collection be extended to include an additional one-on-one interview with focus group participants after the focus groups. Demographic data of study participants could be mined for links to age-related differences. Qualitative data of how much actual time, how many additional questions, and how many repetitive questions could explain what students consider a long time and too many questions. These resources would, in turn, set the background and guide further exploration of instructional tool choices at the technical college in this study. Another possibility to extend this study is to investigate students' perceptions and satisfaction of instructor-led reading and writing instruction compared to the perceptions of students who receive reading and writing instruction with no instructor intervention.

**Conclusion**

This research aimed to identify the perceptions of NCBO students of a web-based reading and writing instructional tool. None of the students in this case study expressed that the web-based reading and writing instructional tool they were required to use in their NCBO lab was easy to use or useful, even though they all expressed specific skills they learned from the tool. Their satisfaction with the tool was low, with one group clearly stating their satisfaction with the NCBO instructor rather than the instructional tool.

This research supported that not all college students respond well to web-based instruction, and it also raised the question of how educators use web-based instructional tools to help students enhance their academic skills. To better understand the implications of these results, future studies could address several things, (a) the reading level of TSIA-restricted students compared to the reading level of web-based instructional tools, (b)

whether the focus of web-based instructional tools is equally about reading skills and writing skills, (c) students' access to the internet and computers needed for web-based instructional tools, especially in a pandemic.

This study focused on the perceptions of underprepared students at a two-year, open-enrollment, technical college because there is a lack of research on technical college students. The degrees that these types of colleges award are usually a means to an end, a job in a skilled trade. They are not usually seen as part of the overall picture of higher education. However, technical programs are popping up in community colleges everywhere as people are required to have at least a certificate for a skilled job and making these previously ignored students a significant and growing part of higher education.

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**Appendix A**

**Focus Groups' Interview Questions**

1.  When did you first use [web-based reading and writing instructional tool]?
2.  How would you describe this [web-based reading and writing instructional tool] to other people who have never used it?
3.  How do you use this [web-based reading and writing instructional tool]?
4.  What do you click on first when you open the [web-based reading and writing instructional tool]?
5.  Do you have to click a lot before you get to your assignment?
6.  What do you do if you get stuck on an assignment in the [web-based reading and writing instructional tool]?
7.  Do you use resources first or answer questions first?
8.  Tell me about the missed questions report I've heard about.
9.  What do you think you learned from this [web-based reading and writing instructional tool]?
10. Do you think what you're learning in this [web-based reading and writing instructional tool] makes your writing better?
11. Describe how you think this [web-based reading and writing instructional tool] is helping you write better.
12. What do you like about this [web-based reading and writing instructional tool]?
13. What don't you like about this [web-based reading and writing instructional tool]?
14. What's one thing you would do to improve [web-based reading and writing instructional tool]?

**Appendix B**

**Instructors' Interview Questions**

1. When do you think your students first used [web-based reading and writing instructional tool]?
2. How would you describe [web-based reading and writing instructional tool] to other people who have never used it?
3. How do you think your students use [web-based reading and writing instructional tool]?
4. What do you think students click on first when they open [web-based reading and writing instructional tool]?
5. Do you think students have to click a lot before they get to an assignment?
6. What do you think students do if they get stuck on an assignment in [web-based reading and writing instructional tool]?
7. Do you think students use resources first or answer questions first?
8. Tell me how you think students use the missed questions report I've heard about.
9. What do you think students learned from [web-based reading and writing instructional tool]?
10. Do you think what students are learning in [web-based reading and writing instructional tool]makes their writing better?
11. Describe how you think [web-based reading and writing instructional tool]is helping students write better.
12. What do you like about [web-based reading and writing instructional tool]?
13. What don't you like about [web-based reading and writing instructional tool]?
14. What's one thing you would do to improve [web-based reading and writing instructional tool]?

**Appendix C**

**Recruitment and Consent Letters**

Dear INRW 0173 Students,

My name is Rita McClelland, and I am a doctoral student in the College of Education at University of Houston. I am conducting a research study examining how students use a web-based reading and writing instructional tool, what they think they learn from it, and how satisfied they are with the tool, and you are invited to participate in the study. If you agree, you are invited to participate in a focus group.

The focus group is anticipated to take no more than 60 minutes during your INRW 0173.3D1 lab class, and it will be audio taped. Participation in this study is voluntary.  Your identity as a participant will remain anonymous and confidential in qualitative studies] during and after the study. You may use a pseudonym or your first name only. The recordings of the focus groups will be transcribed and the transcript will be kept in a locked filing cabinet in my office, TC 238, and digital copies will be kept on my office computer in a password-protected file.
If you have questions or would like to participate, please contact me
at rita.mcclelland@lit.edu.
Thank you for your participation,

Rita McClelland
University of Houston
College of Education
Doctoral Student

Dear INRW Instructor,

My name is Rita McClelland, and I am a doctoral student in the College of
Education at University of Houston. I am conducting a research study examining how
students use a web-based reading and writing instructional tool, what they think they
learn from it, and how satisfied they are with the tool, and you are invited to participate
in the study. If you agree, you are invited to participate in an interview.

The interview is anticipated to take no more than 60 minutes and will be conducted in a
Blackboard Collaborate session that will be both audio and video recorded.
Participation in this study is voluntary.  Your identity as a participant will remain
anonymous and confidential in qualitative studies] during and after the study. You may
use a pseudonym or your first name only. The recordings of the interview will be
transcribed, and the transcript will be kept in a locked filing cabinet in my office, TC 238,
and digital copies will be kept on my office computer in a password-protected file.
If you have questions or would like to participate, please contact me
at rita.mcclelland@lit.edu.
Thank you for your participation,

Rita McClelland
University of Houston
College of Education
Doctoral Student

UNIVERSITY of
# HOUSTON
A CARNEGIE-DESIGNATED TIER ONE
PUBLIC RESEARCH UNIVERSITY

## Consent to Take Part in a Human Research Study

### Title of research study:

*Web-Based Reading and Writing Instructional Tools: A Case Study of Use, Perception, and Satisfaction*

Investigator: Rita McClelland, Dissertation, conducted under the supervision of Dr. Sara McNeil

### Key Information:

The following focused information is being presented to assist you in understanding the key elements of this study, as well as the basic reasons why you may or may not wish to consider taking part. This section is only a summary; more detailed information, including how to contact the research team for additional information or questions, follows within the remainder of this document under the "Detailed Information" heading.

### What should I know about a research study?
- Someone will explain this research study to you.
- Taking part in the research is voluntary; whether or not you take part is up to you.
- You can choose not to take part.
- You can agree to take part and later change your mind.
- Your decision will not be held against you.
- You can ask all the questions you want before you decide and can ask questions at any time during the study.

I invite you to take part in a research study about perceived learning and satisfaction with web-based reading and writing instructional tools because you meet the following criteria of using this type of tool in your INRW 0173 lab classes.

In general, your participation in the research involves a focus group led by the researcher in your INRW 0173 lab class. Overall, your participation will take 60 minutes.

There are no known risks to this study or your participation. There is no personal benefit to you for participating in this study, however, the possible benefit to society will be a better idea of how students use web-based instructional tools, what students who use web-based reading and writing remediation tools think they learn from them, and their satisfaction with the instructional tool. You will not receive compensation for participation