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PRACTICING POSTURES OF GROWTH: A QUASI-EXPERIMENT EXPLORING  
STUDENT ENGAGEMENT AND OWNERSHIP OF LEARNING

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A thesis

Presented to

The School of Social Sciences, Education & Business

Department of Higher Education and Student Development

Taylor University

Upland, Indiana

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In Partial Fulfillment

of the Requirements for the Degree

Master of Arts in Higher Education and Student Development

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by

Morgan B. Allison

May 2021

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**Higher Education and Student Development  
Taylor University  
Upland, Indiana**

CERTIFICATE OF APPROVAL

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MASTER'S THESIS

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This is to certify that the Thesis of

Morgan Brianne Allison

entitled

Practicing Postures of Growth: A Quasi-Experiment  
Exploring Student Engagement and Ownership of Learning

has been approved by the Examining Committee for the thesis requirement for the

Master of Arts degree  
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## Abstract

The American education system has evolved into a competitive learning environment that defines student learning as the ability to pass high-stakes standardized tests and have high grade point averages, but there is a significant gap between K-12 and higher education expectations in what qualifies a student as “smart” and college ready. Literature shows that students who are taught how to take ownership of, engage in, and develop skills to enhance their learning are more likely to be college ready and cultivate deep learning experiences throughout the entirety of their academic career. The purpose of this study is to evaluate if college students can take ownership of and actively engage in their learning when taught various learning skills and mindsets. Using a quantitative quasi-experimental approach, this study was used to evaluate if there was a change in students’ learning when they were taught learning strategies. The results suggest that there was not only a positive impact on a student’s ability to take ownership of their learning when taught various skills, but also in their intentionality, understanding, and mastery of a topic. Developing a student’s ability to own and create deeper learning is a skill that would not only benefit students throughout their entire academic career, but also their entire adult lives.

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## **Chapter 1**

### **Introduction**

The American education system has evolved into a competitive learning environment focusing primarily on student accomplishments, grade point averages, and passing high-stakes standardized tests (Astin, 2017; Barnes et al., 2010; Kuh, 2007; Moore et al., 2010), while focusing less on the purpose, process, and end goals of knowledge and development, the true essence of education (Bain, 2004; Chickering & Gamson, 1987; Kuh et al., 2008). Because of this primary focus on data that analyzes performance and predicts success, students' learning postures have shifted away from an active learning attitude to a more perfection-seeking mindset through letter grades and numerical scores. The American society praises students who naturally excel in academic courses and highlight student achievement on high test scores and grade point averages, but do these successes actually measure intellectual ability and learning?

One hallmark of high school achievement is a student's grade point average, though many scholars would argue that this end result does not directly correlate with productive learning. According to Goodwin and Hein (2016), researchers have found that a high school student's GPA may mask the undeveloped ability to take ownership for their learning due to the heavily supervised secondary school experience. Moreover, the research showed that there was "virtually no relationship between college study habits and attitudes and

high school GPAs” (Goodwin & Hein, 2016, p. 5). Schwartz (2008) expressed that teachers are failing their students by not equipping them to be “proactively stupid” (p. 1771). In other words, teachers are not pushing young scholars to lean into their weaknesses and learn through academic failures. Society portrays failure as academically inadequate (Schwartz, 2008), but educators have found otherwise. Schwartz believes that in order for fruitful learning and outcomes to occur, students must “wade into the unknown” and learn to welcome academic struggle.

### **College Readiness**

While most assume college readiness is focused on mastery of academic content of the K-12 education, college readiness is a holistic learning experience that provides more than just content knowledge (Conley, 2007; Conley & French, 2014; Moore et al., 2010). A holistic education experience does not limit the college experience to only one specific area of a student’s time at a four-year institution; through learning and developing cognitive strategies, contextual skills, and awareness skills and receiving a deeper understanding of the college culture, students upon entering institutions would be better prepared for college because of this holistic foundational understanding (Barnes et al., 2010; Conley, 2008; Conley & French, 2014).

### **Pre-College Standardized Testing**

The United States educational systems place an overwhelming emphasis on standardized testing as the general means to define what should be taught in classrooms and to evaluate student intelligence (Astin, 2017). Most colleges rely

on tests such as the SAT or ACT as a part of the college admissions process because these standard exams can be a baseline to understand what students do and do not know. While these tests can consistently be used for all students, there lies a great inconsistency between what is being taught in the K-12 education classrooms. The standardized exams also demonstrate some inconsistency between what institutions expect students to have learned in their elementary and secondary academic career and what K-12 academics learning expectations are (Conley, 2007). Due to this gap in learning expectations with the K-12 system and higher education, there is an increasing rate of students who attend college but first must participate in remedial courses because they are not prepared for the academic rigor of higher institutions (Conley, 2007; Moore et al., 2010). If educators in the K-12 school systems were able to focus less on intensified test preparation and more on content, skills, and contextual knowledge, one might wonder if students would be better prepared to succeed in the college setting.

### **Student Learning**

As students enter an institution, they vary in their level of educational knowledge (Kuh, 2001). With each state in the United States approaching education differently, students who enter higher education institutions are exposed to different kinds of learning along with different instruction approaches. Just as students are not all in the same stage of learning, it is important to recognize that neither do students learn the same way (Hawk & Shah, 2007). Different learning styles such as holistic, experiential, reflective, abstract, and active learning help differentiate learning concepts in ways that students better learn and understand

content (Hawk & Shah, 2007). Each of these learning styles, if implemented into K-12 schools or higher education institutions, would expose students to a variety of ways that they can experience deep, meaningful learning.

While it is vital to create a learning environment that helps individuals develop skills for instruction, experience, and studying, students must also be engaged in and invest their time into their learning to receive the best outcome (Chickering & Gamson, 1987; Kuh et al., 2008). Through experiences like academic challenges, active learning, faculty interactions, and supportive learning environments, students can become completely invested into the learning experience and find meaning out of the material that they are learning (Kahu, 2013). Along with these tools, students who are able to take ownership of their education, whether it is through failure or success, demonstrate the ability to immerse themselves in deep learning (Bain, 2012). For students to be able to recognize that failure is a part of the process and have the ability continue to work through learning challenges not only is a more positive outlook on growth but also offers a deeper, more rich learning experience because of these overcome obstacles (Bain, 2012; Schwartz, 2008).

### **Purpose of Study**

Do college students take ownership of and actively engage in their learning? If so, how? The purpose of this study is to evaluate if college students can take ownership of and actively engage in their learning when taught various learning skills and mindset. Having this awareness could alter not only the way

that teachers approach instruction but also how students approach learning in the classroom and beyond.

## **Chapter 2**

### **Literature Review**

A growing amount of literature exists regarding college readiness and academic engagement and their relationship with higher education success. Educators place great importance in analyzing pre-college students' academics because having an awareness of students' K-12 level of education helps educators pinpoint how to continue challenging student knowledge. Along with developing awareness of students' academic standing, educators are also questioning how to evolve the current educational system away from the student completely depending on the teacher for learning. Instead the goals educators have for students should be to equip students by teaching tools to help create ownership of academic work, providing a space where students feel safe to practice taught tools and skills, and guiding students to understand the true intent behind the learning process.

In efforts to best serve students as they enter higher education institutions, it is vital to shed light on the significant differing expectations higher education and K-12 education have for their students with regards to what constitutes preparedness at the college level. Along with college readiness, there is great benefit to creating an educational experience that leaves students engaged in and out of the conventional classroom; it is clear throughout literature that academic

engagement is one of the most crucial pieces to fostering and keeping students on a positive trajectory toward continued learning.

### **College Readiness**

College readiness is defined as a student's understanding of content knowledge (Conley & French, 2014) and their scores on high-stakes standardized assessments (Barnes, 2010). Astin (2017) describes the American education system as "favoring its smartest students" (p. 22) and limiting the time and efforts spent with those who are not. There is much emphasis on standardized tests, grade point averages, and letter grades, which are designed as tools to help colleges through the selection process (Moore et al., 2010), but often these evaluations result only in comparing students and ranking them from the smartest student to lowest performing student (Astin, 2017). These tools fail to recognize a student's strengths, self-efficacy, or contextual knowledge of understanding college culture (Astin, 2017; Conley & French, 2014) and according to Astin (2017), "greatly oversimplifies the remarkable diversity of human talent" (p. 25).

As researchers continue to delve into the concept of college readiness, they have found that secondary education preparation for college needs to provide more than just academic knowledge in the core subjects such as reading, writing, science, and mathematics. College readiness is described as a more holistic approach that focuses on student content knowledge (Conley, 2007; Conley, 2008; Conley & French, 2014; Moore et al., 2010), student cognitive strategies (Astin, 2017; Conley, 2007; Conley, 2008; Conley & French, 2014; Kuh, 2007; Weimer, 2014), and a foundational understanding of the college experience



(Astin, 2017; Barnes et al., 2010; Kuh, 2007; Reid & Moore, 2008).

Consequently, a more all-encompassing definition of college readiness is “a multi-faceted concept comprising numerous variables that include factors both internal and external to the school environment” (Conley, 2007, p. 12) while also demonstrating a posture of learning that is able to assess and critically think, be consistent in challenging oneself in growth and engagement, and apply skills to help deepen student learning (Conley, 2007).

### ***Pre-College Academic Preparation***

Though research has found that many American college students are not academically prepared to the extent college educators believe they should be, this lack of readiness does not just fall in the category of content knowledge.

Throughout literature, researchers demonstrate that there is more to students’ readiness than just the understanding of the major subjects learned in the K-12 classroom; students who are college bound need to understand their own metacognition (Conley, 2008; Conley & French, 2014), have cognitive strategies (Barnes et al., 2010), and learn contextual skills (Astin, 2017; Goodwin & Hein, 2016; Weimer, 2014). Each of these proficiencies brings more awareness to the ownership that must take place in students’ academic learning in order to get the most out of their classroom experience.

Students’ understanding of metacognition is not merely that they are able to show what they know, but rather “it is about the student engaging in material and persisting in the face of challenges” (Conley & French, 2014, p. 1027). When a student is able to engage with the materials at hand, this leads to greater

metacognition, or understanding what they learned (Goodwin & Hein, 2016). Similarly with understanding metacognition, students greatly benefit in the academic setting when they are equipped with cognitive strategies (Barnes et al., 2010). There is a large body of research that has identified a variety of skills that serve students best when tackling independent academic challenges such as time management, analysis, study skills, critical thinking, clear oral and written communication, and drawing inferences (Barnes et al., 2010; Conley, 2007; Conley, 2008; Conley & French, 2014; Goodwin & Hein, 2016; Weimer, 2014). Each of these skills helps develop ownership of learning and provides opportunities for students to truly understand learning at a deeper level.

In relation to having an understanding of how one learns as well as the skills that can be tools to aid the learning process, a student is more prepared to enter college when having a broad contextual awareness of what comprises the college experience (Barnes et al., 2010; Conley, 2007). Just as there is great comfort and certainty that comes when one understands how a place, environment, or organization operates, colleges and universities are no different; it is vital for pre-college students to understand the dynamics, culture, and steps to take when entering a university and throughout their time at their institution (Barnes et al., 2010; Conley, 2007).

Whether it be values, norms, the admissions process, required testing, financial aid steps, timelines, or the ins and outs of the everyday life as a college student, these critical “college knowledge” pieces provide students the ability to navigate this new experience successfully (Conley, 2007). Low-income and first-

generation students are often ill-equipped to enter the college setting due to having limited or nonexistent college graduate support and guidance in these specific college dynamics (Moore et al., 2010). Institutions and public school systems would benefit their students by implementing more resources for students with little-to-no guidance and support during the college application process.

### ***Pre-College Standardized Testing***

While, by definition, college readiness encapsulates a holistic approach to successfully prepare for future education, unfortunately these factors are not taken into consideration when creating standardized testing (e.g., SAT, ACT). Because higher education has placed a great emphasis on using standardized testing as the main entry tool for institutional admissions, this has ultimately shaped the culture for K-12 education (Astin, 2017). This has resulted in K-12 educational systems intensifying the pressures of test taking at an earlier age (Astin, 2017). Not only has this competitive test-taking culture limited what and how teachers are able to teach, it is also teaching students that it is not important what you know or how you learn and interact with others, but rather how you test.

If high-stake tests dictate whether high school students are ready for the academic rigor and intensity of college work, would it not be wise for both K-12 education and universities to align their learning standards and outcomes? Conley (2007) speaks to the inconsistency that lies within K-12 testing aligning to what students need to know before entering the university setting: “These [standardized] tests are perhaps good measures of basic academic skills, but not necessarily of the knowledge and capabilities needed for college students” (p. 6).

There would be great benefit to high school guidance counselors and teachers building relationships with universities to evaluate and continue to better secondary education preparation programs to align with what students will need to know to succeed in college.

### ***Remedial College Courses***

The United States educational system has sought ways to put K-12 students in a trajectory for academic success in college, but what research has found is that many traditional students are not prepared for the academic rigor of college (Moore et al., 2010). While it is encouraging that American public education is graduating students at a higher rate than ever before, the high school diploma has lost some of its value due to the growing number of students graduating high school with a high school degree and entering college not prepared for college rigor (Conley, 2007). According to Conley (2007),

this lack of improved college success rates, even in the face of increasingly demanding high school graduation rates, demonstrates how difficult it will be to achieve greater college success by simply having students take more prescribed courses without understanding what is being learned in those courses. (p. 5)

Thus, remedial coursework that focuses on students getting caught up in specific subject matters, but also on academic skills, and tools to achieve academic success in college are key.

However, researchers have also shed light on the concern that students who take at least one remedial course, which is 40% of students who attend

American institutions (Moore et al., 2010), are less likely to complete their college degree compared to students who are academically ready for college academics (Conley, 2007; Moore et al., 2010). Many, but not all, of these students who must participate in remedial college courses come from low-income families and are considered first-generation college students (Conley, 2007). Students who are the first in their family to attend college are often more reliant on the K-12 school system to gain much of their college skills. In addition, because all school systems have their own structure, these students may not recognize their level of college readiness compared to most pre-college students (Conley, 2007). In sum, students that participate in remedial courses often lack academic content knowledge and support from family to understand what it takes to be a successful college student. These at-risk students would greatly benefit from support from both their high school and college representatives collaborating in preparation for college rigor.

### **Student Learning**

Webster's Dictionary defines learning as "gaining knowledge or understanding of or skill in by study, instruction, or experience" (Merriam-Webster, 2020). Because each state in America has their own individual learning objectives for how they approach K-12 education, it is no secret that upon entering college, students are at vastly different learning stages from one another (Kuh, 2001). On top of the challenge that students enter college with different exposures to different educational backgrounds, it is also important to highlight that each student also learns in different ways (Hawk & Shah, 2007). Knowing

that students do not obtain information and knowledge the same way, there are a variety of learning styles that can help educators and students know how to best approach deep learning.

One example to facilitate deep learning is by using Kolb's Experiential Learning Model (Kolb & Kolb, 2005). This four-way learning style approach best helps students understand which type of learning helps them best. These learning types include holistic approaches, experiential learning, reflective observation, abstract conceptualization, and active learning (Kolb & Kolb, 2005). To engage students in deep learning, institutions should create an environment that offers each student academic challenges while also providing personal and academic support (Kuh et al., 2005). No matter where students enter college academically, it is important to provide students with a learning experience that pushes students past their comfort zone and also provide students with a variety of approaches to achieve this knowledge (Kolb & Kolb, 2005; Kuh, 2005).

### ***Student Academic Engagement***

Academic engagement, according to The National Survey of Student Engagement, has an engagement scale made of five key elements that help represent classroom academic engagement: academic challenge, active learning, interactions, enriching educational experiences, and supportive learning environments (Kahu, 2013). Similar to those five key elements, research has specified additional learning dispositions, attitudes, and engagement tools that play a huge role in students' ability to buy into the learning process and be academically engaged in and out of the classroom. While researchers continue to

define the many postures, dispositions, and attitudes that can generate students to be the most academically engaged, there is also a great emphasis on what the classroom experience and teaching styles can do to improve student engagement.

In *Seven Principles for Good Practice in Undergraduate Education*, Chickering and Gamson (1987) point out the importance of not only what content educators teach in their classrooms, but how this information is being taught. To ensure that students are able to fully function and thrive when they leave the classroom and enter into a career, researchers believe that students should be able to “understand and deal intelligently with modern life” through their classroom experience (Chickering & Gamson, 1987, p. 3). Principles such as faculty interaction, working with others, diversifying ways of learning, and implementing learning techniques are numerous ways in which research has shown the positive outcome of engaging students within their learning (Chickering & Gamson, 1987).

Similar to Chickering’s work on student engagement, George Kuh has devoted his career to exploring ways to best help students get the most out of the learning experience. Kuh et al. (2008) believe that “student engagement represents both the time and energy students invest in educationally purposeful activities and the effort institutions devote to using effective educational practices” (p. 542). Having the understanding that students enter college with different backgrounds, content knowledge, and academic skills can lead to a better understanding of student behaviors and how educators can foster relationships with students and the learning process (Kuh et al., 2008).

Throughout the literature, there are a variety of ways in which students can become academically engaged in learning. One of the ways that is crucial to students' ability to engage in their learning is through the development of fostering a trusting community in and out of the classroom (Bain, 2004; Chickering & Gamson, 1987; Kuh et al., 2008). A trusting learning community freely gives students the ability to actively engage in new and challenging educational topics while diminishing fear of judgement or failure (Bain, 2004; Bain, 2012; Facione et al., 1995). Along with having the ability to create community, students who are academically engaged also benefit by having a persistent and optimistic mindset (Bain, 2012; Facione et al., 1995) and demonstrate the ability to collaborate with peers throughout their coursework (Chickering & Gamson, 1987). In summary, Kuh et al. (2005) state it best when they say, "a strong, coherent institutional culture that features talent development, academic achievement, and respect for differences is congenial to student success" (p. 50).

Kuh et al. (2005) stress the importance of identifying each student's background, academic performance, and expectations of the institution's role in their education. Having this insight would provide educators with awareness of the strengths and weaknesses of their students and how to implement effective teaching practices, foster a successful learning community, and offer student interaction with faculty outside of classroom which is just as important as in-class interaction (Kuh, 2003; Kuh et al., 2005). Through "can-do" mindsets, hands-on learning, and blending a positive learning environment with academic support,



these changes can influence the university cultures in how they approach learning in the classroom which will create a ripple effect and set students on a positive trajectory to become actively engaged in their academics (Kuh, 2003; Kuh et al., 2005).

### ***Student Ownership***

“Everyone fails at some point” (Bain, 2012, p. 99). Through failure, Bain (2012) unpacks that the two types of responses often play out clearly depicting two types of students: the “helpless” learners and the “mastery/growth” learners. Mirroring Dweck’s (2008) research on fixed mindsets and growth mindsets and the effect these mindsets have on person’s life, Bain (2012) focuses primarily on students’ postures and self-perceptions as learners. Students who take ownership of their learning, even in failure, demonstrate that they have an overall more positive mindset, seek out new learning strategies, and believe that through failures growth will prevail from their efforts (Bain, 2012). Other learners, who Bain (2012) considers “helpless,” demonstrate the very opposite; through failure, these students “wilted in the face of failure” (pp. 104–105). These students demonstrate poor learning strategies upon encountering challenges and instantly develop a negatively fixed perception of who they are and their limited intelligence (Bain, 2012).

So how do students develop the “growth” or “mastery” mindset? Bain (2012) believes that if students’ approaches to learning are more optimistic, their ownership of their shortcomings will benefit their overall learning outcome in the long run because they perceive their failure as a stepping stone to success rather

than a setback. Schwartz (2008) refers to this concept as “productive stupidity,” which encourages students to be ignorant by choice and work through learning challenges, because learning is not determined by immediate success but rather through the failures along the way. In sum, Schwartz (2008) states it best: “The more comfortable we become with being stupid, the deeper we will wade into the unknown and the more likely we are to make big discoveries” (p. 1771).

### **Connecting College Readiness to Student Learning**

As demonstrated in the literature, there are many elements to what students need in order to be academically ready for college rigor. When a student is not academically prepared to take on the taxing work load and depth of college coursework, this can lead to disengagement in a student’s work or even cause the individual to leave the institution altogether. What the research did not cover was if students who are unprepared for college can take ownership of and actively engage in their learning. By focusing on this connection between academic readiness and academic engagement, institutions would be able to understand and better equip incoming students and have a better understanding of how to retain these students from their freshman year to graduation.

### **Summary**

Through understanding how current American K-12 education and higher education expectations are misaligned and how tools can help students be more prepared for college and help them learn, it is easy to understand why different skills, dispositions, and learning mindsets have a positive impact on students’ educational experience and educators’ approach to teaching. In light of this, the

current research seeks to answer: Do college students take ownership of and actively engage in their learning? If so, how?

## **Chapter 3**

### **Methodology**

To best answer the research question, this study was conducted as a quantitative quasi-experimental approach to measure college students' learning through academic strategies. The quasi-experimental approach was selected to evaluate if there was a change in students' learning when they were taught learning strategies. Creswell (2012) defines a quasi-experiment as a nonrandom assignment of group participants. The quasi-experimental approach allows researchers to administer a pre-test to a selected group of participants, integrate one or more interventions upon receiving pre-test results, and administer the post-test to the same group of participants upon receiving the interventions (Creswell, 2012). This research design allowed clarity in understanding if college students' learning was impacted through the teaching of learning strategies.

### **Context and Participants**

The research for this study took place at a small, faith-based, liberal arts institution located in the Midwest. This institution enrolls approximately 2,000 students. The participants of this study were current freshmen enrolled in the institution's required first year experience course. There were 414 students enrolled in the first year experience course; of these, 171 agreed to participate in the study and fully completed both pre- and post-tests for a participation rate of 41%. This course was designed to be an informational course that intended to help

students transition to college while also equipping students to understand the liberal arts education. The course included discussion, readings, films, and other activities to grow a deeper understanding of the liberal arts.

The curriculum primarily focused on the liberal arts. Yet, it is important to note that part of the curriculum included specific information on how to improve learning. The *learning* curriculum included two categories. One focused on student attitude or mindset. This was labeled “disposition” and included five dispositions or attitudes students needed to develop to become better learners. These dispositions were: active engagement, love of learning, willingness to fail, inquisitiveness, and intentional effort. “Strategies for deep learning” was the other category. Whereas the dispositions emphasized the importance of attitude, the strategies emphasized making connections. The strategies included: holistic, progression, synthesis, and application. For this freshman course, learning was defined and operationalized into three main categories; awareness, understanding, and mastery. These three categories of learning allowed professors to understand if the learning curriculum, student attitude and mindset development, and deep learning were being achieved by students throughout the course.

### **Procedure, Data Analysis, and Benefits**

This was the third year that the first year experience course included learning strategies as part of the curriculum. A few weeks into the semester students were administered a pre-test measuring their level of learning in general. The purpose of waiting a few weeks into the semester was that it allowed for at least some understanding and exposure to the college experience which in turn

hopefully provided students with a more accurate understanding of their learning. Then, for the remainder of the semester, the learning dispositions and deep learning strategies were taught and reinforced to the students. The same instrument (with a few added items) was administered again at the end of the semester as a post-test to determine if change occurred.

For the purpose of the current research, the researcher sought IRB approval and partnered with the faculty of the first year course. Students in the course had the opportunity to allow their data to be used in the research. Although all students enrolled in the course were required to complete the pre- and post-measures as part of the course, no student was expected nor required to allow their data to be used in the current research. Students who were willing to participate in the research completed a consent form. After the post-tests were completed, the results were analyzed through descriptive statistics and also a dependent *t*-test. The purpose of using a means comparison test was to evaluate if students were able to actively engage in and take ownership of their learning and, if so, which learning strategies and skills were the most beneficial to their learning.

## **Chapter 4**

### **Results**

The purpose of this study was to evaluate if college students can take ownership of and actively engage in their learning when taught various learning skills and mindsets. The results are presented in the following order: First, the evaluation of college students' perception of their ability to show ownership of learning is summarized. Following this, the results from the pre- and post-test scores for the three learning categories, including dependent *t*-test analysis, are presented. Next are the results of the descriptive statistics for the eleven course learning elements. The chapter closes with a conclusion of the findings.

#### **Student Ownership and Improvement in Learning**

Although the pre-test and post-test instruments were almost identical, the post-test had additional questions about students' perception of their learning and their ownership. Table 1 reports the results of these additional questions. It is clear that college students perceived they were able to improve as learners and also take ownership of their learning. While students demonstrated personal growth and ownership in their learning, it is not known if this growth was directly related to the course that taught learning skills and dispositions or if it is impacted by other aspects in the college experience. This will be further discussed in Chapter 5.

**Table 1**

Mean Results for Students Owning Their Learning

Item	<i>N</i>	<i>M</i>	<i>SD</i>
I have improved as a learner this fall	171	4.23	0.663
[This course] has helped me to be a more intentional learner	171	3.70	0.993
Overall, I am learning how to take ownership of my learning	171	4.25	0.612

*Note:* Results were on a Likert scale (1 - Strongly Disagree, 2 - Disagree, 3 – Neither Agree or Disagree, 4 - Agree, 5 - Strongly Agree).

### **Dependent *t*-Test Results for Student Learning**

For the purpose of this research, learning in this course was defined in three categories: awareness, understanding, and mastery. These three categories were also combined to create a compiled score, resulting in four categories. Each category was analyzed through dependent *t*-tests to determine if differences occurred (see Table 2). It is appropriate to conclude that students grew as learners throughout the semester because of the statistically significant difference in the understanding and mastery scores. However, the small effect size for these two categories was minimal. Effect size measures the magnitude of the experimental impact. Effect size typically falls under these categories: a small effect size is equivalent to 0.2, a medium effect size is 0.5, and a large effect size is 0.8. For this research, the effect size would be considered small.



**Table 2**

Descriptive Statistics Results for Student Learning Postures

Learning Item	<i>Pre-Test</i>		<i>Post-Test</i>		t(170) <sup>a</sup>	<i>p</i> <sup>b</sup>	Cohen's d
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Awareness	5.557	0.831	5.431	0.943	-2.279	.024	-0.17
Understanding	5.519	1.056	5.730	0.994	3.084	.002	0.24
Mastery	4.680	1.199	4.972	1.187	3.286	.001	0.25
Compiled	5.256	0.920	5.350	0.947	1.602	.111	-

<sup>a</sup> This measures the mean difference between the post- and pre-test. <sup>b</sup> Statistical significance is indicated when  $p > .05$  indicates statistical significance.

One challenge that should be noted is that students regressed in their awareness scores and this was statistically significant. Awareness was operationalized as the lowest level of learning. Consequently, it is possible that students had inflated awareness scores on the pre-test. For example, one question associated with awareness was, "I know what is taking place in this course."

It is realistic that as the semester progressed students may have realized they did not know as much as they originally thought. Furthermore, it is also possible that the regression in awareness scores is due to the COVID-19 global pandemic which required students to be socially distant and wear masks and receive alternative course deliveries (e.g., virtual, hybrid), making it more difficult to truly develop awareness. Consequently, when compiling the three categories into an aggregate score, results showed no statistical difference between the pre- and post-tests. This is due to the impact of including the awareness category since there was regression over time.

### Results of Course Learning Elements

Students were taught eleven strategies to improve their learning. When answering the question “*Which of the following learning elements have been helpful to you as a learner? (Check as many as apply)*”, students indicated that they most frequently relied on intentional effort to improve their learning (see Table 3). Along with intentional effort, students also frequently relied upon love of learning and application.

**Table 3**

Descriptive Statistics Results for Course Learning Elements

Learning Item	<i>N</i>	Frequency	%
None Were Helpful	171	1	0.58
Synthesis Connection	171	36	21.05
Progression Connection	171	41	23.98
Willingness to Fail	171	80	46.78
Active Engagement	171	92	53.80
Inquisitiveness	171	94	54.97
Owning Learning	171	97	56.73
Engaging Learning	171	98	57.31
Holistic Connection	171	104	60.82
Love of Learning	171	106	61.99
Application Connection	171	107	62.57
Intentional Effort	171	115	67.25

## **Conclusion**

Although the dependent *t*-test yielded small effect size for understanding and mastery, it seems that teaching students learning postures and elements are beneficial to students' ability to take ownership of and actively engaging in their learning. It is appropriate to conclude this due to the results of the students' report of their improvement of ownership in their learning, the impact of the course learning postures on learning, and overall impact of course elements on their ability to learn. Although the awareness category saw lower scores on the post-test as compared to the pre-test, it can still be concluded that learning did occur due to the results of the understanding and mastery categories. While there were unique challenges and circumstances students faced during this semester, such as the pandemic, the results from the research highlight the value that comes from students developing ownership, giving intentional effort, and finding application to what is being learned which is consistent with literature (e.g., Bain, 2012). In the next chapter, the implications and limitations of this research will be discussed.

## **Chapter 5**

### **Discussion**

The results of this research revealed: (a) students perceived ownership and growth in learning, (b) statistically significant growth occurred in the categories of understanding and mastery, and (c) particular strategies were identified that students were most likely to use to improve their learning. After evaluating if college students can take ownership of and actively engage in their learning when taught various learning skills and mindsets, it is clear that teaching these strategies can be a benefit to students' learning experience

#### **Student Perceived Ownership and Growth**

This research demonstrated that students perceived the learning strategies as beneficial, which seems to have led to a positive impact on their outlook and ownership of learning. The positive impact is not just students' ability to take ownership of learning but also their improvement as learners both as a whole and in intentionality (see Table 1). This holds true to Bain's (2012) research on the two major student mindsets, helpless or master/growth, and the impact that positive mindsets have on students' ability to grow, give more effort, and find enjoyment in their learning. This optimistic mindset allows students to take learning strategies, own the challenges that they may face, and put the learning strategies into practice rather than allowing challenges to be paralyzing (Bain, 2012; Conley & French, 2014). When students are able to integrate a posture of readiness to learn along with specific methods for effective learning, students are able to own their learning (Conley & French, 2014).

Though student perception findings are important, the research interpretations should be approached cautiously. What has yet to be understood is if this freshman course is the reason for students' ability to take ownership of learning or if it was the impact of their college freshman year. Moreover, students perception that they are improving may not actually mean they are improving. More research on measurable learning outcomes, such as GPA, would be helpful.

### **Improvement in Understanding and Mastery**

While it seems very likely that the learning gains on the understanding and mastery categories in Table 2 are a result of teaching the strategies, it is not clear if there are other factors in the freshman college experience that would impact this perception. One can make the argument that learning skills and dispositions are crucial to students' understanding, and mastery of key content "is achieved through the exercise of broader cognitive skills embodied within the key cognitive strategies" (Conley, 2007, p. 14). In order for students to truly master and understand content, students need to be able to reflect on their own metacognition and approach learning not with the mentality of what they already know but, rather, reflecting on what is currently being learned and integrating learning strategies to develop a deeper learning outcome (Conley, 2007; Conley & French, 2014; Weimer, 2014). This was the purpose of teaching learning strategies within the context of a content course.

### **Frequently Used Strategies for Improved Learning**

Out of all the deep learning strategies taught in this freshman course, students frequently relied on the holistic and application deep learning strategies.

These two deep learning strategies are arguably the most impactful learning strategies for students to grasp as it can be integrated into academics and their future professional career. When professors implement holistic and application into their class teachings and assignments, students are better equipped to create more meaning and a deeper understanding of the content because they must make it their own (Chickering & Gamson, 1987; Grauerholz, 2001). By developing a deeper understanding of the subject through holistic and application learning strategies, this in turn also affects the way that students are academically engaged in the learning material (Kuh et al., 2008) and fosters a student's ability to love the process of learning (Bain, 2012). What has yet to be understood is if this freshman course is the reason for students' ability to take ownership of learning or if it was the impact of their college freshman year.

### **Implications for Practice and Future Research**

There are many practical findings through this research that educators would benefit from incorporating into their classroom teaching. Because learning elements, postures, and strategies can be integrated into any subject, these strategies could be incredibly beneficial to integrate into any course and even educational setting, including K-12 education. The high-stakes test-taking culture embedded in American education creates early on a divide between the average student and the small minority of "smart" students. Because of this high-stakes testing culture, educators are now forced to focus on how to "teach to the test" rather than focusing on how to teach in a way that creates deep learning (Astin, 2017).

Developing younger students' awareness of how to make learning their own could drastically impact students' education career in a positive way and is practical as learning strategies can be taught in any course or form of educational setting. By equipping students with tools and support for all learners, but specifically provisional students, these strategies and skills would help shift the learning experience from relying solely on the teacher to obtain information and help students make learning their own (Moore et al., 2010). Astin (2017) notes that if both K-12 education systems and higher education were to assess the effectiveness of their educational programs based on the measurement and improvement in student learning and not the success rate of test scores, this would better enable both educational systems to better prepare their students for overall success.

Moreover, educators should consider integrating learning strategies with the curriculum being taught in the classroom. This could be done through explicitly teaching students through discussion, lecture, and explanation. Another option could include creating assignments that require students to use the strategies taught or making students more accountable for learning by using the strategies such as on exams, group projects, or other activities. Through the implementation of these strategies, not just in teaching them but also including them in the learning experience, students will gain an overall deeper knowledge of the concepts they are learning.

Along with practice, there are a variety of implications that can be made for future research. One implication for future research could include continuing

evaluating this course and its impact on student learning through the pre- and post-test while also developing a control and experiment group component. For example, specific experiment groups could receive a specific academic skill taught in depth throughout the semester and then compare which, if any, dispositions were most beneficial. This design would allow researchers to press further into the study through hearing student experiences and course impact.

Another implication for future research could include looking into how teaching ownership and skills impacts provisional students in their learning. Understanding that students who are more academically challenged in the classroom are less likely to persist in their college career, it is important that provisional students are on institutions' radars and have designated programming, support, and courses that will help them be autonomous and persist during their college career (Moore et al., 2010). Knowing that students who are academically at-risk when they enter institutions are challenged even more by the academic rigor of college and have not been equipped on how to approach academic challenge (Moore et al., 2010), researching the impact of their academic progress when taught ownership and skills for provisional students could benefit university's students learning, retention, and overall satisfaction in their academic career.

One final implication for future research could include looking into the current relationship between K-12 schools districts and local institutions. In order to truly understand and analyze what key factors help students become college ready, there must be continuous collaboration between secondary education and



post-secondary education to ensure that schools goals, programming, and curriculum are aligning with what institutions are expecting students to master as they enter the university setting (Conley, 2007; Moore et al., 2010). Looking into the impact that is had when school districts and postsecondary institutions work closely together to align expectations and curriculum could positively impact the cohesiveness in K-12 curricula but also impact all students' academic preparedness when they enter into the university setting.

### **Limitations**

Due to COVID-19, professors were not able to teach in the large group classes for this course compared to what has been done in years past. Instead, these experiences were discontinued and replaced with self-directed curriculum and assignments. These were reinforced in the small group classes that were peer led. The information that was taught was relayed by professors to each group peer teacher. Furthermore, because of this adjustment, it was not possible to have controlled and experimental groups. As mentioned in the future research, having a control group would allow for greater understanding and also certainty regarding the impact of teaching the learning strategies.

Additionally, another limitation found within this research is that these applied learning strategies are only taught in one specific course. To understand the true impact of teaching these learning strategies, it would be helpful to have additional courses building off of this course to be able to get a better sense of course impact. Along with learning impact, another limitation within this research is the institutional type. With this course being taught at a small, faith-based,

liberal arts institution which emphasizes the importance of teaching and learning, this course and experience could look very different at larger institutions.

### **Conclusion**

The purpose of this study was to examine if college students are able to take ownership of and actively engage in their learning when taught various learning skills and mindsets. Through these findings, it seems that teaching learning dispositions and strategies not only as students enter the college institution but also throughout the entire student academic career would prove to be beneficial to each learner. Developing a student's ability to own and create deeper learning is a skill that would remain a tool that could be not only used during the classroom experience but for their entire adult lives. Educational systems across the world would greatly benefit by placing a bigger emphasis on how to create deeper, more holistic learners. Education would become less of a competition of scores defining what qualifies a student as "smart" and instead shift the focus on how to make learning deep, meaningful, and long-lasting.

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