The Association of Multiple Experiential Learning Courses and Graduation Rate

By

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This dissertation is dedicated to the memory of my father, Edward "Landon" Hendrick, a true child of God, who in his few short years upon this earth taught me, by example, the most important lessons in life by demonstrating: 1) a deep love for God and a strong relationship with our Lord and Savior, Jesus Christ, with whom all things are possible; 2) an unconditional love and devotion to family and friends; 3) the value of hard work; 4) the value of lifelong education; 5) the importance of helping our neighbors as exemplified in the scripture of Luke 10:29-37; and 6) a love of our country with the freedoms and opportunities it affords.

I also dedicate this work to my mother, Agnes Edmonds Hendrick, who taught me that whatever I set my hand to do, I should do it as unto the Lord (Colossians 3:23). She always pushed me to be my very best and never accepted less. It is through her determination and sacrifices that I was able to attend college, and my entire career has been made possible because of her. To my son, Jason Swayze, who helped explain statistics to me and supported my efforts even though it consumed so much of our family time; and to my son, Jeremy Swayze, who encouraged me along the way and consistently asked if I had my homework finished; to my husband, Donald Swayze, who has always supported my studies; and to my grandson, Mason Swayze, who has brought so much joy to my life, I couldn't have done it without each of you. You are my inspiration.

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ABSTRACT

During the past several years, the federal and state governments have adopted a college completion agenda using graduation rates as evidence of student success. With the demand for increased accountability on colleges and universities to ensure student success, institutions of higher education are searching for more effective ways to help students achieve their academic and professional goals. Experiential learning has risen to the forefront as a high impact practice for increasing student persistence and ultimately graduation numbers. Although there has been significant research on the positive impact of experiential learning on student success, there is little research regarding the association between the number of experiential learning credit hours (courses) taken and graduation likelihood.

This study was conducted to explore the relationship between the number of experiential learning courses taken and student graduation likelihood. Utilizing retrospective data obtained from a large public university in Tennessee, Pearson Chi-square tests were performed to analyze race, sex and number of experiential learning (EXL) credit hours on graduation likelihood. In addition, the researcher performed strength of association and effect size tests for each Chi-square analysis. Results demonstrate that there was a very significant association between EXL credit hours and graduation. The likelihood of student graduation showed strong incremental significance with each additional level of credit hours completed.

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INTRODUCTION

Problem Statement

For the past several years, the cost of higher education has been increasing at an astounding rate while public funding has been reduced. Even more distressing is the fact that about one-half of those that begin college fail to graduate and drop out owing thousands of dollars in student loan debt. As a result colleges and universities have come under intense scrutiny regarding their retention, progression, and graduation rates over the past several years. According to Eaker and Sells (2016), "State legislatures, business communities, politicians, parents, and students are becoming increasingly vocal in expressing their dissatisfaction with the one thing that is *not* changing in higher education" (p. 9). The authors point out that even though tuition costs have increased at an alarming rate over the past 15 years, "student completion rates have remained stagnant, hovering around 50 percent" (p. 9). To complicate matters even more, with the staggering amount of student debt and dissatisfaction among employers, "Americans no longer buy into the argument that higher costs translate into a higher quality experience—or into greater student success" (p. 10). According to Weber, (2017), "within a century, accountability in higher education had shifted from a peer created accreditation process to a federal mandate of reporting of graduation rates" (p. 3).

With this increased emphasis on graduation rates as the primary measure of student achievement, it is imperative for institutions of higher education to find ways to improve their graduation rates, while at the same time maintaining academic rigor and student satisfaction. Dr. Nathan Long, President of Saybrook University (2024), advises,

"As postsecondary institutions face skepticism about its ROI, it's critical that they engage students, collaborate with other institutions and connect with industry to deliver a truly valuable learning experience." While 4- and 6-year graduation rates continue to be far below what is expected from stakeholders, it is therefore, important to seek out best practices which lead to higher graduation rates.

Stakeholder Demands for Student Success

Higher education institutions are accountable to a very diverse set of stakeholders. In addition to a call for increased graduation rates, various stakeholders have different demands on higher educational institutions. For example, to employers student success means a better prepared workforce; for civic leaders and liberal arts scholars, it means students are better prepared to actively engage in the community; for politicians, it may mean students are prepared to enter a specific career field upon graduation; and for, parents and students, it means that they will see a positive return on their tuition investment dollars (Eaker & Sells, 2016).

Although there is little agreement on the definition of student success, most federal and state governments view retention, progression, and ultimately, graduation as the baseline indicators of student success. Ironically, as higher education institutions are expected to significantly improve their graduation rates, the student population over the past few decades has dramatically shifted (Weber, 2017). Not only is there a smaller pool of high school graduates to recruit from, but unlike the historically elite college going population, now a great number of college students bring with them a combination of the following traditional barriers to student success. Many are from historically under-represented groups, first generation, low income, adults who have been out of school for

several years, or students who are otherwise underprepared academically. (Eaker & Sells, 2016) Colleges and universities are no longer in a position to recruit only the most college ready students or to "weed out" those students who are struggling. (Eaker & Sells, 2016) With the emphasis on college completion and funding formulas that are based upon retention, progression and graduation rates, institutions must find ways to serve those students who would have historically fallen through the cracks (Eaker & Sells, 2016). Experiential Learning (EXL) has been shown to be a valuable high impact practice (HIP), and therefore this study will examine the effectiveness of student participation in multiple levels of EXL on graduation frequency.

College Completion Agenda

Since the early 2000's, several organizations have been actively promoting the college completion agenda. Probably most notable, in 2009, the nonprofit, Complete College America (CCA), began its mission "to work with states to significantly increase the number of Americans with quality career certificates or college degrees and to close the attainment gaps for traditionally underrepresented populations" (Complete College America, Linked in, n.d. About Us, para. 1 retrieved May 1, 2023). Complete College America strategies include first year experiences, career exploration, academic and career alignment, and adult learner engagement (Complete College America, Strategies, 2023). In the publication, No Middle Ground, CCA advocates for "the importance of language and intentionality in creating programs and policies to disrupt dysfunctional systems and pave the way for all students to complete college" (Complete College America, 2022, No Middle Ground Abstract). Tennessee was quick to adopt the Complete College America agenda which led to Complete College Tennessee with a new degree attainment mission

for the State of Tennessee. This eventually led to the Drive to 55 legislation which strives to ensure that 55 percent of Tennesseans will have a college degree or certificate by the year, 2025 (Drive to 55 Alliance, 2018).

The Bill and Melinda Gates Foundation also supports strategies to improve postsecondary success and put students at the center. The organization states, "We work with college and university leaders, innovators, policymakers, and state and local leaders to ask the hard questions and advocate for evidence-based changes in policy and practice to boost student success" (Bill and Melinda Gates Foundation, 1991-2023, At a glance, para. 4). The Lumina Foundation which also focuses on educational attainment states, "Our mission is to prepare people for informed citizenship and success in a global economy" (Lumina Foundation, n.d., About, para. 2). "Lumina Foundation is an independent, private foundation in Indianapolis that is committed to making opportunities for learning beyond high school available to all. We envision a system that is easy to navigate, delivers fair results, and meets the nation's need for talent through a broad range of credentials." (Lumina Foundation, n.d., About, para. 1) The Lumina Foundation works with government agencies, nonprofits and private businesses to bring about change. Their tagline declares, "Building a new system of learning and success" (Lumina Foundation, n.d., About, para. 1). The American Association of Colleges and Universities (AAC&U) is another important organization that works to promote improvements in higher education. The "AAC&U serves as a catalyst and facilitator for innovations that improve educational quality and equity and that supports the success of all students" (AAC&U, 2023, Homepage).

In recent years, many government funding formulas for higher education have changed from being based upon the front-end results of enrollment headcount numbers to funding based on the back-end results of number of students graduating from a given institution within four or six years. To meet the demand of increased accountability, many institutions are searching for ways to increase their student completion rates. "Tying state funding for higher education to defined benchmarks of student success has become a primary tactic of many college completion plans" (Eaker & Sells, p. 31). This has led to a need for results-based leadership in higher education institutions. In turn, the need for accurate and timely data has grown at an overwhelming pace. However, the data must be mined in order to be useful.

> Data, standing alone, are only facts. They must be viewed in comparison in order to become useful information. For example, if a university reports that its graduation rate is 52 percent, that is simply a fact. But what does it mean? Has the university improved its graduation rate? Is a graduation rate of 52 percent better or worse than others of similar size and student body composition?" (Eaker & Sells, p. 101).

In the cases where funding is moved from one institution to another institution based upon direct comparisons of student success benchmarks, it is even more critical to have up-to-date information regarding one's institutional success as compared to sister institutions. According to Millea, Wills, Elder, & Molina (2018),

> Students who leave before they complete their degrees can cost universities thousands of dollars in unrealized tuition revenue and replacement recruiting costs. For students, dropping out can mean unrealized potential and lower earnings over their working careers. The success of the university and the success of its students are intertwined (p. 309).

A report by Georgetown University (2019) citing U. S. Department of Education statistics, advises that students who drop out without finishing their degrees are three times more likely to default on their student loans than students who complete their degrees. (Georgetown University, 2019). Hanson (2023) advised that 43.8 million borrowers owe a total of $1.757 trillion in student loan debt. According to Jones (2022), students "Failing to properly repay federal student loans, which are funded by taxpayers and administered by the U.S. Department of Education, invites severe consequences ranging from wage garnishment – in which the government withholds a percentage of your paycheck – to seizure of income tax refunds." (Jones, 2022, para. 4)

In addition, based upon the number of students defaulting on their loans, institutions may also be penalized for student loan default numbers. For example, the negative impact of students defaulting on their student loans could cost institutions their ability to receive federal aid. Butrymowicz and Klodner (2019) advise, "Schools can lose eligibility for federal financial aid if they have a default rate of 30 percent or higher three years in a row or if their rate hits 40 percent" (para. 6). In a study (Takyi-Laryea, Levine, & Oliff, 2022) covering the period from 1998 through 2018, the Pew Charitable Trust found that one-third of borrowers had defaulted on their student loans. Therefore,

legislators are calling for even stricter penalties on colleges and universities. Carrasco (2022) with the National Association of Student Financial Aid Administrators, informs that the currently pending bill, The COLLEGE Act, calls for institutions to repay a percentage of their student loan defaults.

Improving student success is also critical, since the pool of college applicants is shrinking. For example, Kevin Carey (2021), vice president of the think tank, New America in Washington, DC warns, "The population of college-age Americans is about to crash. It will change higher education forever." (Carey, 2021, para. 1). Carey explains that the birthrate has been decreasing since 2008 and reached the lowest point in American history in 2020. He continues to advise that institutions of higher education have reached a limit in the number of recent high school graduates they can recruit and, therefore must manage the "complex mix of past, present and future demographic trends" (Colleges have likely hit a ceiling on how many 18-year olds they can coax onto campus section, para. 1).

Shippensburg University President, Charles Patterson, (Carey, 2021) states "Presidents these days are in the business of deconstruction—not in the sense of tearing down what their forebears created, but of rethinking and reconfiguring what universities have and who they are, for leaner times" (Higher Ed's eight decade run of unbroken good fortune may be about to end section, para. 7). Carey predicts that the greatest driving force on higher education will be the labor market. He adds that universities such as Shippensburg are already aligning curriculum with the labor market and "looking to create more short-term, job-focused certificates that lead up to a bachelor's degree, and others that supplement BA's after graduation." Carey warns, "The near future of higher

education is one of decline, and its consequences will reshape the American landscape" (2021, The vocationalization of less-selective colleges will further divide students by income and class section, para. 6). The increasing demands for student success in the form of graduation and job placement rates mean institutions of higher education must find ways to better ensure their student success rates.

However, up until the recent past, graduation rates were not a major consideration to institutional budget; because, funding was based on student headcount and the emphasis was therefore focused on continual recruitment of new students to replace those lost to attrition. The change in accountability measures and funding formulas has left many colleges and universities scrambling to understand the factors that impact their graduation rates and looking for interventions to increase their success rate.

For example, the Tennessee General Assembly passed the Complete College Tennessee Act (CCTA) in January 2010. This act led to the implementation of a new outcomes-based funding formula for Tennessee's institutions of higher education. Based on the new funding formula, institutions were no longer being funded based on enrollment numbers. Instead, funding was granted based upon degree completion and upon students' progression toward defined benchmarks toward completion (Rost, 2016, pp. 3-4). The goal of the new funding formula was "to produce improvements in student retention, graduation, job placement, and research activity" (Boyle, Gotcher, & Otts, 2018, p. 1).

Creating Significant Learning Experiences

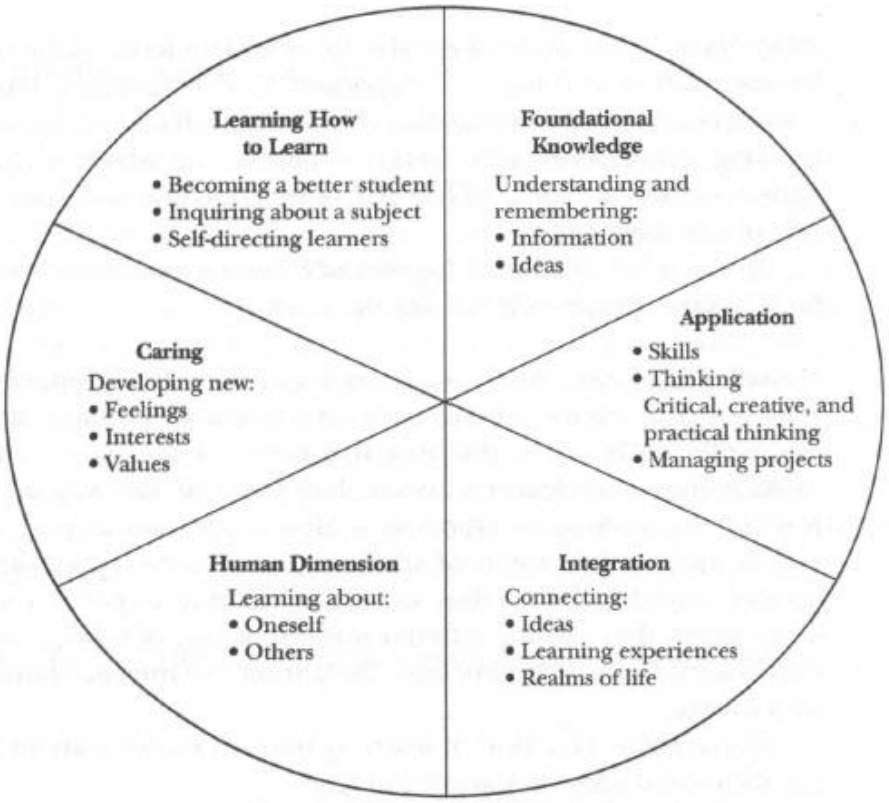
Fink (2013) tells us that in order to truly make a difference in students' learning, "colleges need to assemble good curricula, good instruction, and good faculty who can

interact well with students" (p. 9). It is especially important for faculty to develop courses utilizing good educational practice which leads to significant learning. The author explains that even good lecturing has limited effectiveness in helping students retain information, developing the ability to transfer learning to new situations, developing critical thinking and problem solving skills or producing a change in attitude or the desire for life-long learning. She advocates that when relying on lecture as the main method for student learning, students often fail to see the value in their learning or its application in their future. Fink refers to a comprehensive study by Courts and McInerney, (1993, pp. 33-38) regarding student perceptions of their learning which showed that the students' most common complaints were regarding the way the teachers teach. Fink states, "By far the most common concern was directed specifically at the tendency of teachers to rely primarily on lectures and workbook exercises to transmit information, on the absence of interaction, and on the lack of what student after student referred to as 'hands-on learning' (Fink, 2013, p.5)." Fink advises that significant learning experiences help students see the value in their learning.

> In a powerful learning experience, students will be engaged in their own learning, there will be a high energy level associated with it, and the whole process will have important outcomes or results. Not only will the students learn throughout the course but by the end of the course they will also clearly have changed in some important way—they will have learned something important. And that learning will have the potential for changing their lives in an important way (p.8).

The following figure demonstrates the principles of course design which leads to significant learning.

Figure 1
Taxonomy of Significant Learning



Source: Fink, 2013, p. 35

Fink explains that ready or not, institutions of higher education will be forced to change the way they operate in order to be competitive in the new economy, and the "key requirements will be the ability to offer a high-quality learning experience." (p. 14). She advocates that the entire educational process must become much more learner centered in order to meet the needs of the diverse population of students in the coming years.

High Impact Educational Practices

High impact educational practices utilizing student-centered teaching approaches, has been recognized for leading to student engagement, a sense of a belonging and increased self-confidence.

> High-impact practices, or HIPs, are active learning practices that promote deep learning by promoting student engagement as measured by the National Survey on Student Engagement (NSSE). To be a high-impact practice, the experience must satisfy the definition established by George Kuh (2008, Kuh & O'Donnell, 2013) and his colleagues at the Association of American Colleges and Universities (AAC&U): achievement of deep learning, significant engagement gains, and positive differential impact on historically underserved student populations (University of Maryland Eastern Shore, Center for Teaching Excellence High Impact Practices, 2023).

According to the AAC&U report by Kuh (2008), High Impact Educational Practices provide a strong positive impact on student success as demonstrated by the National Survey of Student Engagement (NSSE). Studies reveal that students who participate in high-impact, experiential learning activities are better equipped to face the challenges and demands of the future global workplace. Research suggests that students who engage in two or more high impact activities are found to have higher GPAs and higher overall student engagement (Kuh, 2008). Kuh adds that ideally every student would participate in at least one HIP each year in college.

In a 2017 Elon University interview with George Kuh, he explains the benefits of these high impact practices in the following:

> The reason that we've come to call certain practices high impact is because when students do them, they benefit in unusually positive ways compared to their peers who don't get the same opportunity. Students spend a lot more time and effort, with effort probably the key piece—focused time and energy on tasks that extend over a significant period of time. Students spend more time with faculty and peers and the interactions they have are more substantive. There are more opportunities for feedback in real time--students are allowed to see how their faculty members respond to problems that arise. (Kuh, Center for Engaged Learning, Elon University, 2017, October 23.)

Kuh also emphasizes that in high impact practices, students engage in much more reflection about what's happening to them in their experiences. Students are evaluating how these experiences are similar or different from prior understanding and how they connect with the other things they are doing in their lives. As a result of these experiences, students are able to demonstrate that they can now do something that they were not able to do before the experience. Kuh further proclaims:

> This list of 11 is not just powerful for virtually every student, but they have unusually powerful compensatory effects, so it turns out while almost every student benefits in unusually positive ways, the students who benefit the most are the students who are the least well-prepared for college--who may come from low-income backgrounds, often first-generation students, and I think the reason is these kinds of activities put students in concrete situations where they now see relevance and meaning of what it is they're doing in college which sometimes is

> the main reason why a lot of students leave college prematurely. (Kuh, Center for Engaged Learning, Elon University, 2017, October 23.)

Kuh explains that often students drop out because they don't really understand the relevance of the course content and cautions us of the importance of high impact course design. He states the following:

> This isn't new to people who understand the powerful developmental effects of a well-designed undergraduate experience, but now we have data to affirm that the people who have been doing this work and the students who experience it primarily, really have some great advantages out of their undergraduate program. (Kuh, Center for Engaged Learning, Elon University, 2017, October 23.)

According to Fasules & Campbell (2020), a recent report by the AAC&U confirmed that the following competencies are considered the essential high demand competencies across the workforce. These five competencies include 1) communication, 2) teamwork, 3) sales and customer service, 4) leadership and 5) problem-solving and complex thinking, and are also associated with higher earnings. These workplace competencies align closely with student learning outcomes gained as a result of experiential education. Rutter and Mintz (2019) advocated for expanded access to experiential learning activities as one of the eight steps that institutions should take in order to improve student success. The authors state,

> There is no doubt that the best way to build students' credentials or to help them make an informed choice about a future career is to increase their opportunities to take part in experiential learning opportunities. Internships, mentored research, practicums and field-based learning experiences, service

> learning, and study abroad all help students clarify their educational and career goals and build their skills." (Rutter and Mintz, 2019, para. 6).

Experiential Learning as a High Impact Practice

In 1999, Katula and Threnhauser advocated that experiential learning is one of the most important movements in higher education in the past thirty years. Kendall, et. al. (1986) explains, "Experiential education refers to learning activities that engage the learner directly in the phenomena being studied. This learning can be in all types of work or service settings by undergraduate and graduate students of all ages" (p.1) Through research, Kuh, (2008) identified experiential learning courses as high impact educational practices including cooperative education, internships, undergraduate research, service learning, study abroad and other applied learning activities. Cantor (1995) asserts that experiential learning activities are natural motivators for students which then leads students to be more involved in the learning experience.

Tagg (2004) advises that student learning is increased when their courses are relevant to their lives; therefore, programs such as experiential learning helps to improve student learning. Steffes (2004) asserts that internship courses help students to see themselves as more connected to their education and helps them to recognize the value in their coursework. Boyer (1990) recommends experiential learning as a means to develop the scholarship of engagement. Finally, Butcher and Patton (2004), asserts that experiential learning helps students understand how theory is applied to real situations. In addition, students are able to develop a sense of self and begin to see how they can make contributions to society and find meaning in their lives. Additionally, Cantor (1995) lists developing a respect for diversity as an outcome of service learning programs. Other

student outcomes often associated with experiential education include: more curiosity and motivation for learning, self-confidence, stronger belief in social and civic responsibility, development of specific career goals, greater respect for other cultures, realization that they can make a difference in the world, and experiences that help students gain employment (EXL QEP, 2006, pp. 4 - 5).

This study will examine the graduation frequency of students who participate in multiple levels of experiential learning as compared to students who do not participate in the EXL Scholars Program.

Statement of Purpose

The value of experiential learning has been recognized by the technical and business majors for decades, but not as prevalent in liberal arts courses. However, according to the Eyler (2009) and American Association of Colleges and Universities (AAC&U), experiential learning is also the ideal method for liberal educators "to design learning environments and instruction so that students will be able to use what they learn in appropriate new contexts—that is, to enable the transfer of learning" (Eyler, 2009, p. 24).

According to the aforementioned research, experiential education immerses students in the learning experience allowing them to apply knowledge from the classroom to "real world" problems. This helps students to integrate new knowledge with the old in order to develop and utilize critical decision making, problem solving, communication, teamwork, leadership, and intercultural skills. Therefore, the purpose of this study is to investigate if the graduation frequency at one large regional institution does, in fact,

improve incrementally with each experiential learning course completed and whether or not race or sex influences the results.

Research Questions

RQ1: Is there an association between enrollment in multiple EXL designated courses and graduation among college students**?**

RQ2: Is there an association between enrollment in multiple EXL designated courses and graduation among all races of college students?

RQ3: Is there an association between enrollment in multiple EXL designated courses and graduation among male and female college students?

Research Hypothesis

H_1: Student participation in multiple EXL designated courses is associated with graduation among college students.

H_2: Student participation in multiple EXL designated courses is associated with graduation among all races of college students.

H_3: Student participation in multiple EXL designated courses is associated with graduation among male and female college students.

Definition of Terms

1. Experiential Learning – A "process of learning and a method of instruction, immersing students in an activity and asking for their reflection on the experience; learning activities that engage learner directly in the phenomena being studied" (Cantor, 1995).
2. High Impact Practice – a set of teaching and learning practices whose positive impact on students has been established by educational research. (Kuh, 2008).

3. Cohort – The initial matriculation period in which a group of students enter their home institution for full time study towards an undergraduate degree (Williams, 2013 in Rost, 2016, p.8).
4. Graduation Frequency – The percentage of first-time, full-time students who received a bachelor's degree within six years. (MTSU Board of Trustees Dashboard, 2023).
5. Graduation – Meeting the requirements for a Baccalaureate Degree as outlined in the Middle Tennessee State University Undergraduate catalog. To graduate from MTSU with a bachelor's degree, a student must meet the following requirements.
    - Students must complete a minimum of 120 semester hours with a 2.00 grade point average. (Some programs may require more than 120 hours.)
    - A minimum of 25 percent of credit for each degree awarded by MTSU must be earned through offerings by the University. Typically, a minimum of 30 hours earned through MTSU is required; however, in degree programs of more than 120 semester hours a greater number of hours would be required.
    - At least 36 semester hours of junior and senior (3000-4000 level) courses must be completed. Courses numbered 1000 and 2000 which are substituted for 3000- or 4000-level courses may not be used in the calculation of the 36 upper-division hours.
    - With approval of the dean of the college in which the student is pursuing the major, a candidate may complete 12 of the last 30 hours at another college or university or by CLEP.

- No more than 60 semester hours completed by credit-by-examination, credit for service-related experience, and flight training may be counted for credit in a degree.
- Students must complete at least 12 semester hours at the upper-division level through MTSU in each major and at least three semester hours at the upper-division level through MTSU in each minor. Additionally, no course used to satisfy a requirement in a major or minor may be used in another major or minor.
- The student who seeks a second concentration in a major must complete a minimum of nine (9) hours that do not duplicate hours in the first major/concentration.
- Students may not major and minor in the same discipline.
- A minimum of 50 semester hours of senior college credit will be required of all students who transfer from colleges of less than four-year designation.
- A minimum 2.00 GPA will be required in a major pursued as a graduation requirement and a minimum 2.00 is required in some minors.
- All candidates must meet the General Education requirements as outlined and satisfy a technology requirement.
- No more than 25 percent of the credits for nonbusiness degrees may be in courses commonly found in a school of business. Additionally, a student can have only one business minor.
- During priority registration when two semesters are remaining for graduation, students must submit a completed Intent to Graduate form, and if required, an

upper-division form to their graduation analyst. Students should contact their college advisors or the college advising office of their major for the appropriate process within their colleges. Some programs require formal approval with additional requirements for admission to candidacy.

- Any or all students may be required to take one or more tests designed to measure general education achievement and/or achievement in selected major areas as a prerequisite to graduation for the purpose of evaluation of academic programs. Unless otherwise provided by an individual program, no minimum score or level of achievement is required for graduation. Participation in testing may be required for all students, for students in selected programs, and for students selected on a sample basis.
- In compliance with SACSCOC accreditation standards, all students will have training in and use of technology (MTSU 2022-2023 Undergraduate Catalog, Undergraduate Degree Requirements).

6. Service Learning – Service-learning is a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities. Curriculum includes structured field-based “experiential learning” alongside community partners, which reinforces course learning outcomes. Within the TBR System, credit-bearing service-learning designated courses are incorporated into general education or college core requirements for a degree program. (Tennessee Board of Regents, 2023).

7. Applied Experience Course – Application of discipline related knowledge through projects with businesses and non-profit organizations; a service-learning component is not required (Experiential Learning Quality Enhancement Plan, MTSU, 2006).
8. Creative Activity Course – Activity that is driven by the student's imagination, talents, and/or skills that result in a tangible outcome such as works rendered in aural, visual, physical, written word, electronic media, and/or other forms. Performance and exhibition of creative works may also be included (Experiential Learning Quality Enhancement Plan, MTSU, 2006).
9. Study Abroad – Kentucky Institute for International Studies courses (KIIS). Cooperative Center for Study Abroad courses (CCSA) courses, and formal study abroad courses developed and led by MTSU faculty. Other types of study abroad courses approved by the MTSU International Education and Exchange Office and the academic department are also acceptable (Experiential Learning Quality Enhancement Plan, MTSU, 2006).
10. Internship – Work experiences with businesses or non-profit organizations that require discipline-based knowledge (Experiential Learning Quality Enhancement Plan, MTSU, 2006).
11. Cooperative Education – Work experiences with businesses which generally alternate periods of classroom instruction with periods of paid discipline-related work experience (National Association of Colleges and Employers, n.d., Understanding Cooperative Education).

12. Critical Reflection – Engagement in systematic reflection and demonstrating the ability to critically examine experiences and create connections between those experiences and disciplinary knowledge (Experiential Learning Quality Enhancement Plan, MTSU, 2006).
13. Student Success – Defined by the MTSU's Office of Student Success (2023) as "the institution's persistence, retention and graduation rates".

Limitations

This study is limited to the students from one large public university located in the southeastern region of the United States. Therefore the results of this study might not be representative of students from other types of institutions or those in other regions.

Delimitations

The entire student population for the specific years chosen are included in study. The study also includes the various demographic characteristics including race and sex. Several cohort groups were included in the study to increase the ability to generalize the findings. Furthermore, the cohort years were intentionally selected to eliminate any subsequent support programs that may have influenced the outcomes.

CHAPTER II.

REVIEW OF LITERATURE

Introduction

From the earliest days of human history, experiential learning or hands-on learning has been used to pass on knowledge and skills to the next generation. However, the primary format for teaching in institutions of higher education has historically been the lecture or "sage on the stage" accompanied by written tests based on rote memorization of course content (Dewey, 1938). Fortunately, during the past few decades, the value of hands-on learning has once again been gaining in popularity. Educational researchers have found that student learning is much deeper and richer when students actively participate in the learning process. Experiential learning can best be described by the ancient proverb, "Tell me and I'll forget; show me and I may remember; involve me and I'll understand" (goodreads.com, Confucius, n.d.).

John Dewey is credited as the father of modern experiential learning with his progressive educational philosophy which advocated for learning by doing. Dewey (1938) placed a high value on student engagement and argued that students should be active participants in their learning, rather than empty vessels to pour knowledge into. Thomas Ehrlich sums it up with the statement, "Students learn best not by sitting in a closed room but by opening the doors and windows of experience to the world around us" (Jacoby and Associates, 1996, Foreword).

"Experiential learning opportunities offer students assignments and activities based on real-life situations or primary research that engages them in reflective problem-solving with multiple potential avenues of inquiry" (University of Texas Austin, 2023,

Experiential Learning). The process of experiential learning—problem solving, decision making, reflecting on successes and failures, and making adjustments for the future based upon these experiences—allow students to fully understand what they are learning. As a result, students see the relevance of what they are studying and are more motivated to learn. "Another important goal of today's experiential education is connecting higher education to the needs of society, which can be done by providing programs of public service that encourage students to utilize classroom knowledge in solving problems. This then has the potential to improve local and international communities." (Rost, Swayze & McCormick, 2023, p.30).

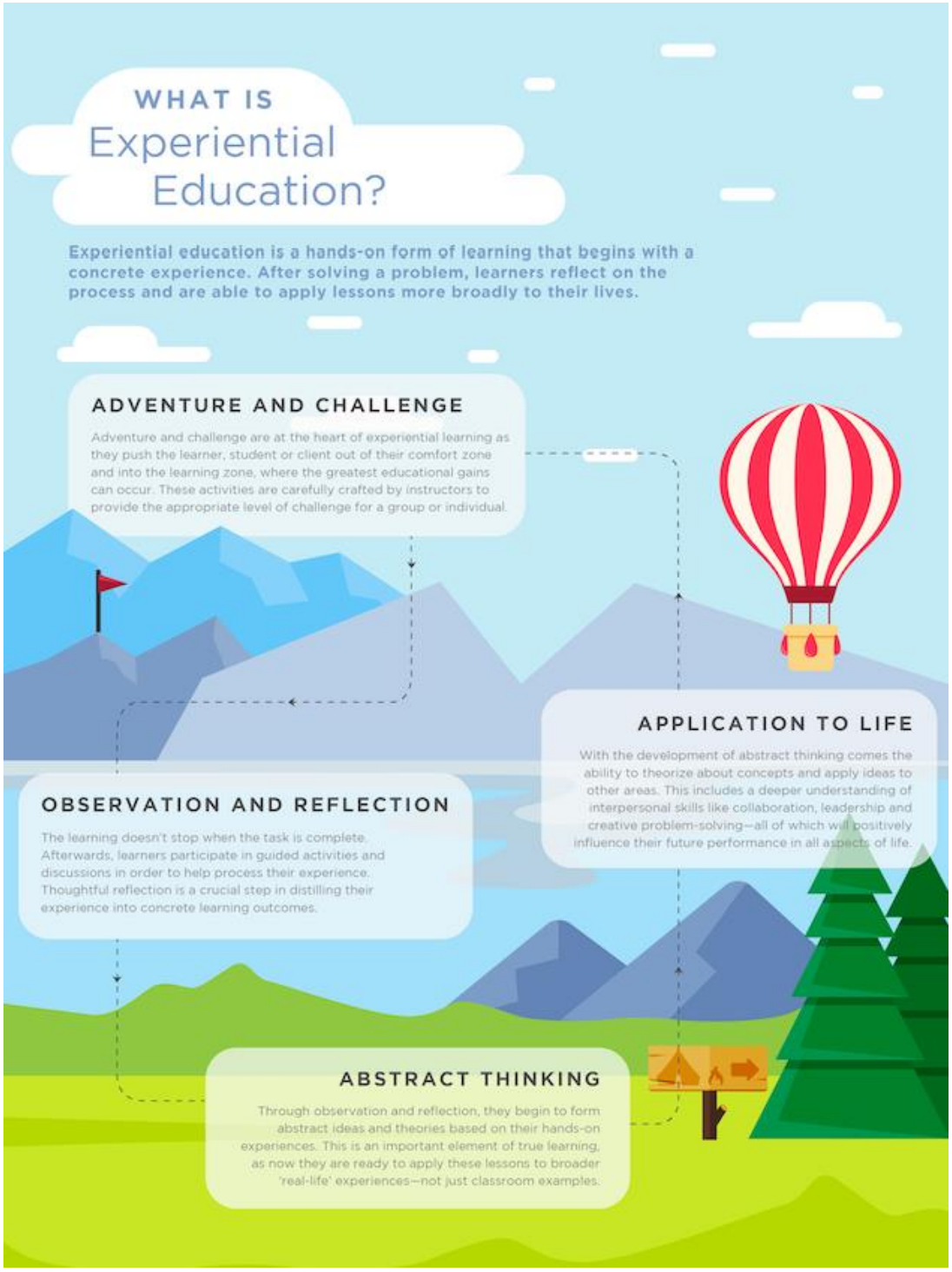
Experiential Learning, therefore, is characterized by w*hat the student does, rather than what the faculty member does* in the learning process (Cantor, 1995). Experiential learning begins with a concrete experience in which the student actively participates. The experience should push students out of their comfort zones, so that they must use problem-solving skills in order to perform. Reflection is also a critical part of the learning process. This helps students process their experiences into learning. Students should consider things such as: What went well and should be repeated in a similar circumstance? What did not go well? What should be done differently next time? How did this experience change or confirm the student's attitudes or perceptions? Preferably, students will reflect upon their experiences at intervals throughout the experience and then conclude with a final reflection at the end of the experience. Reflection and critical thinking should ultimately lead the students to determine how they can use the lessons and apply them to real world circumstances. Ideally, students should be able to integrate their new knowledge across courses, across disciplines, and in their personal and

professional lives as well. Huang, et al. (2018) explains that experiential learning "contains all the following elements: reflection, critical analysis, synthesis, opportunities for student initiative, decision-making power, and accountability" (p. 6).

The Association for Experiential Education (What is Experiential Education?, n.d.) explains this process in the following steps: 1) Adventure and Challenge, 2) Observation and Reflection, 3) Abstract Thinking, and 4) Application to Life. In the Adventure and Challenge phase, students engage in the hands-on experience. The experience should be developed to provide the correct level of challenge. In order to be most effective, the experience should push students out of their comfort zones and into new experiences where the greatest learning can occur. The second phase is Observation and Reflection. During this step students should be guided into deep critical reflective thinking, so that students are able to convert their experience into learning. Phase three involves Abstract Thinking. In this phase students should be able to form abstract ideas and theories from their experiences and be ready to apply them to broader "real world" problems. Finally phase four is Application to Life where students become able to apply new concepts to other areas to enhance all aspects of their lives. In other words, significant learning should be transformational. Fink states, "…teaching should result in something that others can look at and say, 'That learning experience resulted in something that is truly significant in terms of the students' lives'" (Fink, 2013, p. 7). The following figure depicts the four phases of experiential learning as viewed by the Association for Experiential Education.

Figure 2

Experiential Education Diagram



Source: Association for Experiential Education, What is Experiential Education

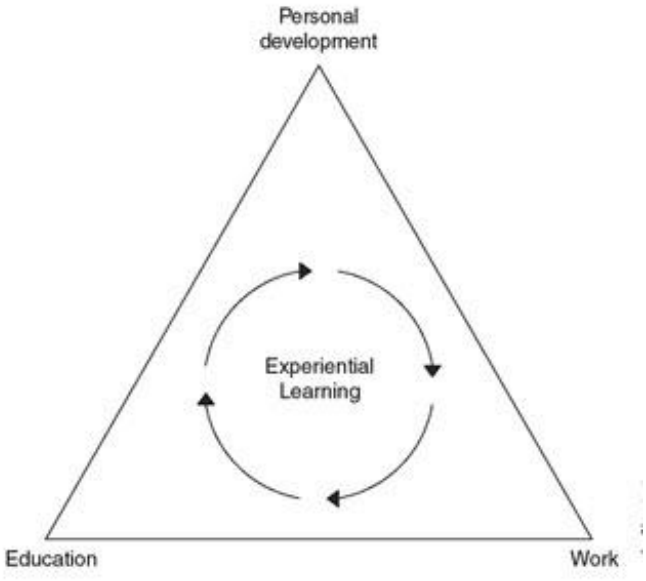
Foundations of Experiential Learning Theory – John Dewey

This study is grounded in experiential learning theory. John Dewey, in the early 1900's, conducted extensive research on student learning via experimentation and experience (Dewey, 1938). Although it has been almost a century since Dewey proposed his theory of experiential education, his work is just as relevant today. His findings have been the foundation on which all other experiential learning theories have rested. Dewey criticized the traditional form of education as being an authoritarian type of institution which was much different from all other types of social institutions. He argued that the traditional form of education was not conducive to actual learning, but rather relied upon memorization of past facts. In defining the traditional form of education, Dewey stated, "The subject matter of education consists of bodies of information and of skills that have been worked out in the past; therefore the chief business of the school is to transmit them to the new generation" (p.17). He continues by pointing out that the traditional style of education requires a rigid code of conduct in which the students must be docile, receptive, and obedient. He explains that books are the primary tools and have held the wisdom of the past, while teachers are the instruments through which this knowledge and skills are delivered. In this context, Dewey explains that in traditional education, learning means "acquisition of what is already incorporated in books and in the heads of the elders…It is taught as a finished product, with little regard either to the ways in which it was originally built up or to changes that will surely occur in the future" (p.19). He contends that it is largely "the cultural product of societies that assumed the future would be much like the past, and yet it is used as educational food in a society where change is the rule, not the exception" (p. 19). Ironically, if nearly 100 years ago, Dewey was

advocating for a change in educational techniques to keep up with changes in society, then how much more today do we need students who have been educated with the critical thinking and problem solving skills to adapt and change in our fluid society. David Kolb, (1984, p.4) in his discussion on the legacy of John Dewey, provides the following diagram to demonstrate Dewey's awareness of the interconnection between Education, Work, and Personal Development in the Experiential Learning process.

Figure 3.

Diagram of Dewey's Interconnection of Education, Work and Personal Development



Source: Kolb, 1984, p.4

Dewey informs us that his philosophy of progressive education rests on "the idea that there is an intimate and necessary relation between the processes of actual experience and education" (Dewey, 1938, p. 20). He explains that he is not advocating for rejecting

all organization and authority, but rather to determine, “What is the place and meaning of subject-matter and of organization *within* experience?” (p. 20). He felt that the traditional form of education was so connected with the past that it did not prepare students for their future. Rather than helping students learn, it actually hindered their intellectual and moral development. He, therefore, asks the question, “How shall the young become acquainted with the past in such a way that the acquaintance is a potent agent in appreciation of the living present?” (p.23). Dewey advocated that education should take into consideration the social nature of humans explaining, “The principle that development of experience comes about through interaction means that education is essentially a social process” (p. 58). Dewey states, “I assume that amid all uncertainties there is one permanent frame of reference: namely, the organic connection between education and personal experience; or, that the new philosophy of education is committed to some kind of empirical and experimental philosophy” (p.25).

Dewey’s philosophy can be seen in the Chinese Proverb, “It is better to travel 10,000 miles than to read 10,000 books” (Apple, March 27, 2023, China Travel, 150 Best Chinese Quotes and Sayings about Love, Life…).

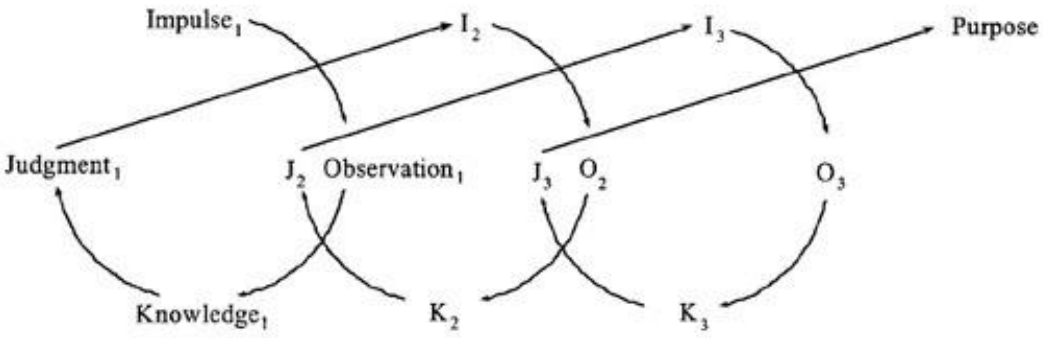
Dewey quickly cautions, however, that “The belief that all genuine education comes about through experience does not mean that all experiences are equally educative” (p. 25). He advises that some experiences may be enjoyable but still not lead to the desired learning outcomes. He further warns that in some cases, the experiences may be so disconnected from one another that they do not lead to learning at all. Therefore, not only the degree of satisfaction with the experience; but also the structure and order of the experiences can certainly affect the learning outcomes. He asserts that

while traditional education did consist of experiences, the experiences of both the students and teachers were mainly of the wrong kind. Dewey questions, "How many students for example, were rendered callous to ideas, and how many lost the impetus to learn because of the way in which learning was experienced by them?" (p. 26). Therefore, Dewey advocates for quality experiences which engages the student fully in the activity and leads to further learning. He stresses, "The quality of any experience has two aspects. There is an immediate aspect of agreeableness or disagreeableness, and there is its influence upon later experiences" (p. 27). Therefore, it is incumbent upon the teacher to arrange for experiences that engage the student in the learning process and will lead to desirable future experiences.

According to Kolb (1984), Dewey emphasizes "learning as a dialectic process integrating experience and concepts, observations and action. The impulse of experience gives ideas their moving force, and ideas give direction to impulse" (p. 22). Kolb further adds, "Postponement of immediate action is essential for observation and judgment to intervene, and action is essential for achievement of purpose. It is through the integration of these opposing but symbiotically related processes that sophisticated, mature purpose develops from blind impulse" (p. 22). Dewey's model of experiential learning proposed that the learning process consists of four stages starting with Impulse, then Observation, which leads to Knowledge and finally to Judgment. In Dewey's model, the experiences are then repeated, and each time the impulses becomes further refined and more sophisticated until they have become purposeful action. In this way each experience adds knowledge to the previous experience and serves as a foundation for the next experience. Below is a depiction by Kolb (1984, p. 23) of Dewey's model of experiential learning.

Figure 4

Dewey's Model of Experiential Learning

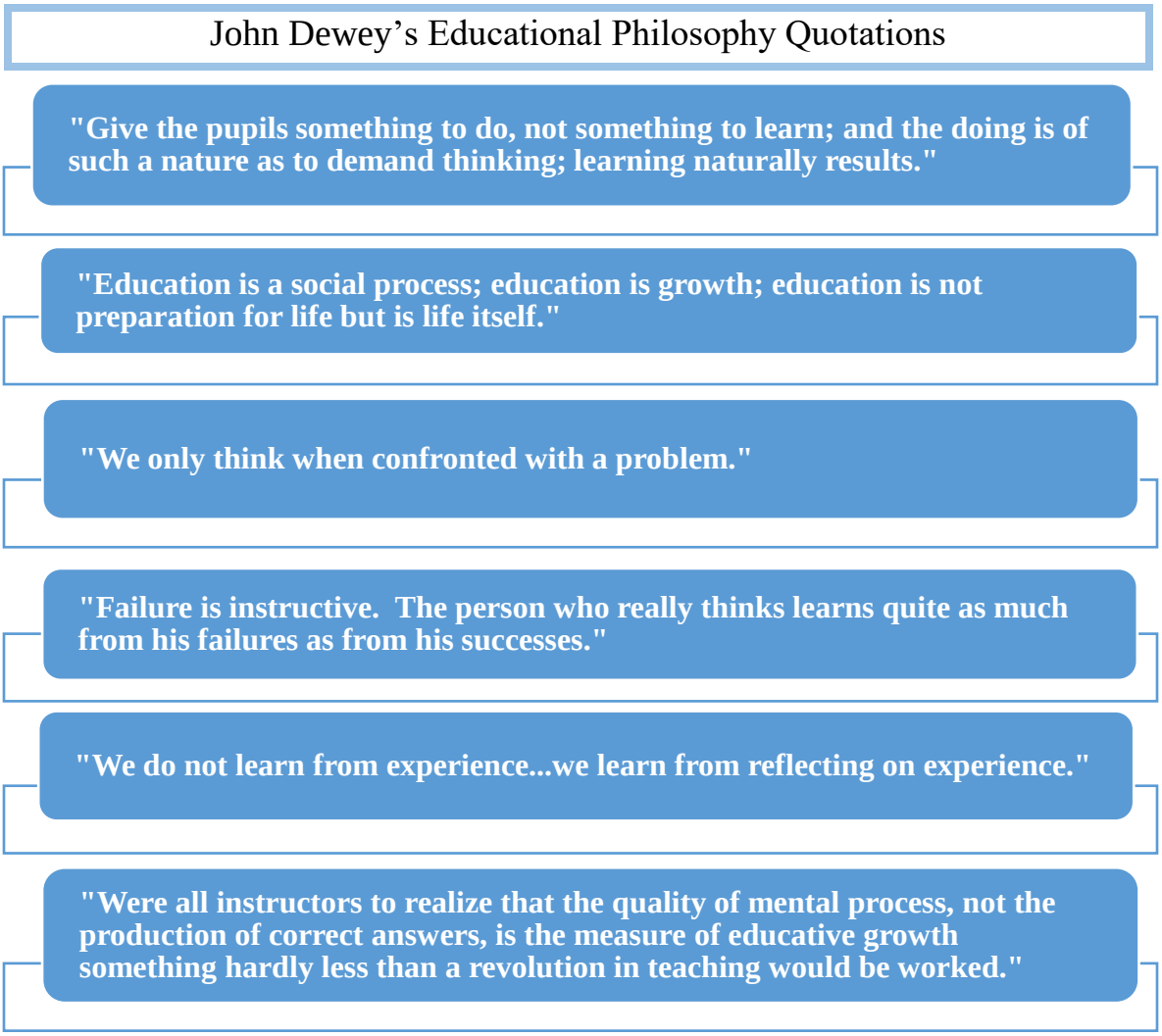


Source: Kolb, 1984, p. 23

According to Hesser (2014) John "Dewey laid the groundwork for the paradigm shift from teaching to learning, often referred to as backward design" (p.3). He advocated for student-centered teaching practices, rather than the traditional faculty-centered approaches. He also firmly believed in the value of learning from one's own mistakes in order to advance to the next level. Dewey's educational philosophy can be summed up in the following foundational quotes:

Figure 5

Dewey's Educational Philosophy Quotations



Kolb's Experiential Learning Model

Furthering the work of Dewey, David Kolb defined learning as "the process whereby knowledge is created through the transformation of experience" (Kolb, 1984, p. 38). Kolb and Kolb (2005), explain, "Experiential learning theory draws on the work of

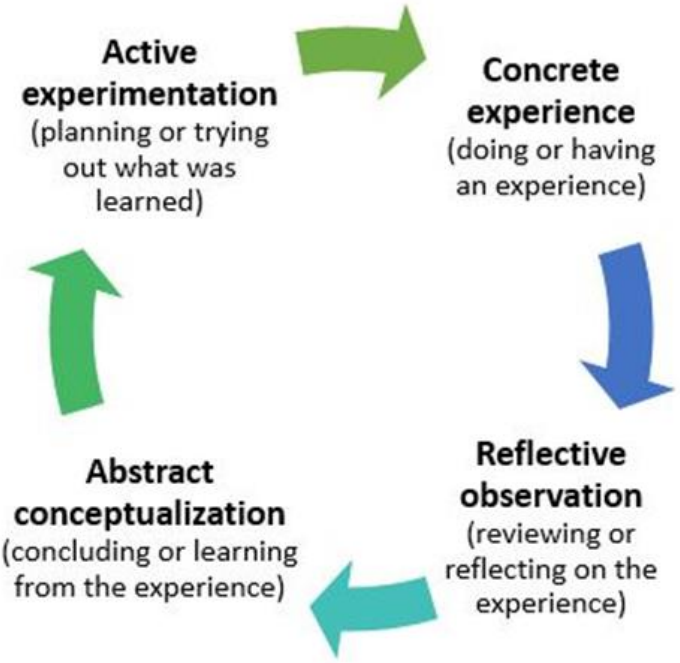
prominent 20th century scholars who gave experience a central role in their theories of human learning and development…to develop a holistic model of the experiential learning process and a multilinear model of adult development." (p. 194). The authors further describe Experiential Learning Theory as a "learning cycle or spiral where the learner 'touches all the bases' -- experiencing, reflecting, thinking, and acting in a recursive process that is responsive to the learning situation and what is being learned. Immediate or concrete experiences are the basis for the observations and reflections." (p.194). In 2007, Lee stated, "Experiential learning is a broad term referring to multiple programs and systems for providing students in educational institutions with work-based applied learning opportunities" (p.38). According to the Association for Experiential Education (2023), "Experiential education is a philosophy that informs many methodologies, in which educators purposefully engage with learners in direct experience and focused reflection in order to increase knowledge, develop skills, clarify values, and develop people's capacity to contribute to their communities." (Association for Experiential Education, 2023, What is Experiential Education?, Retrieved April 25, 2023).

Therefore, the key to an effective experiential learning course is a balanced mix of faculty instruction, student participation/experimentation, reflection, and authentic assessment/ feedback. Kolb's model of Experiential Learning Theory consists of four stages the learner must progress through in order to transform their experiences into knowledge. Students then demonstrate their learning "when they are able to apply abstract concepts to new situations" (Kurt, December 28, 2020, Updated September 25, 2022, Kolb's Experiential Learning Theory & Learning Styles, Para. 2). Kolb (1984)

explains that in experiential learning the emphasis is on the "process of adaptation and learning as opposed to content or outcomes. Second is that knowledge is a transformation process being continuously created and recreated, not an independent entity to be acquired or transmitted. Third, learning transforms experience in both its objective and subjective forms. Finally to understand learning, we must understand the nature of knowledge, and vice versa" (p. 38).

Figure 6

Kolb's Experiential Learning Model



Source: Dr. Serhat Kurt Posted on December 28, 2020 Updated on September 25, 2022

First, Kolb believed that students must actively be engaged in the experience in order for learning to take place. Secondly, as with Dewey, he explains that reflection is

the process through which true learning is achieved. In the third step, the learner incorporates the new knowledge with past experiences in order to draw conclusions. In the final step, the learner applies their knowledge to new experiences. The stages of Kolb's Experiential Learning Cycle are explained in detail in the following figure.

Figure 7

Kolb's Learning Cycle Defined

Kolb's Learning Cycle

As Kolb's learning theory is cyclical, one can enter the process at any stage in the cycle. However, the cycle should then be completed in entirety to ensure that effective learning has taken place. Each stage is dependent on the others and all must be completed to develop new knowledge.

1. Concrete Experience:

Kolb's learning process cycle begins with a concrete experience. This can either be a completely new experience or a reimagined experience that already happened. In a concrete experience, each learner engages in an activity or task. Kolb believed that the key to learning is involvement. It is not enough for learners to just read about it or watch it in action. In order to acquire new knowledge, learners must actively engage in the task.

2. Reflective Observation:

After engaging in the concrete experience, the learner steps back to reflect on the task. This stage in the learning cycle allows the learner to ask questions and discuss the experience with others. Communication at this stage is vital, as it allows the learner to identify any discrepancies between their understanding and the experience itself. Good vocabulary also allows a solid review of the events that occurred.

3. Abstract Conceptualization:

The next step in the learning cycle is to make sense of these events. The learner attempts to draw conclusions of the experience by reflecting on their prior knowledge, using ideas with which they are familiar or discussing possible theories with peers. The learner moves from reflective observation to abstract conceptualization when they begin to classify concepts and form conclusions on the events that occurred. This involves interpreting the experience and making comparisons to their current understanding on the concept. Concepts need not be "new"; learners can analyze new information and modify their conclusions on already existing ideas.

4. Active Experimentation:

This stage in the cycle is the testing stage. Learners return to participating in a task, this time with the goal of applying their conclusions to new experiences. They are able to make predictions, analyze tasks, and make plans for the acquired knowledge in the future. By allowing learners to put their knowledge into practice and showing how it is relevant to their lives, you are ensuring that the information is retained in the future.

Source: (Kurt, 2020, 2022) Kolb's Experiential Learning Theory & Learning Styles - Educational Technology

Kolb and Kolb (2005) further describe experiential learning theory in the following manner:

- Learning is best conceived as a process, not in terms of outcomes.
- All learning is relearning.
- Learning requires the resolution of conflicts between dialectically opposed modes of adaptation to the world.
- Learning is a holistic process of adaptation to the world.
- Learning results from synergetic transactions between the person and the environment.
- Learning is the process of creating knowledge. (p. 194)

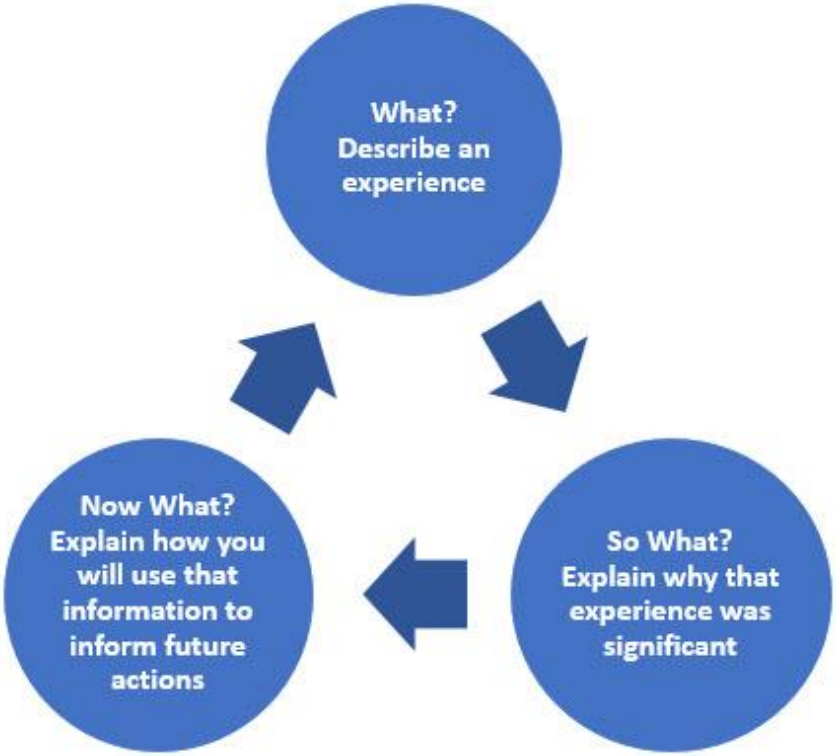
Borton/Driscoll Experiential Learning Model

Another popular experiential learning model is the Borton/Driscoll, "What? So What? Now What?" model. This experiential learning cycle is based on Terry Borton's (1970) three essential questions: **What?**, **So What?**, and **Now What?** which he initially designed for use in an educational environment. The **What?** phase is where the learner describes their experience. This includes details such as the physical environment, other

people that were involved, and things that affects the senses answering questions like, *What did you see?, What did you hear? What did you smell?*. In this phase learners should also be aware of emotional reactions such as how the experience made them feel. In the **So What?** phase, the learner explains what the experience means to him or her or the significance of the experience. In the final **Now What?** phase, the learner explains how he or she will incorporate this new knowledge into future decisions or actions.

Figure 8

Borton/Driscoll Model

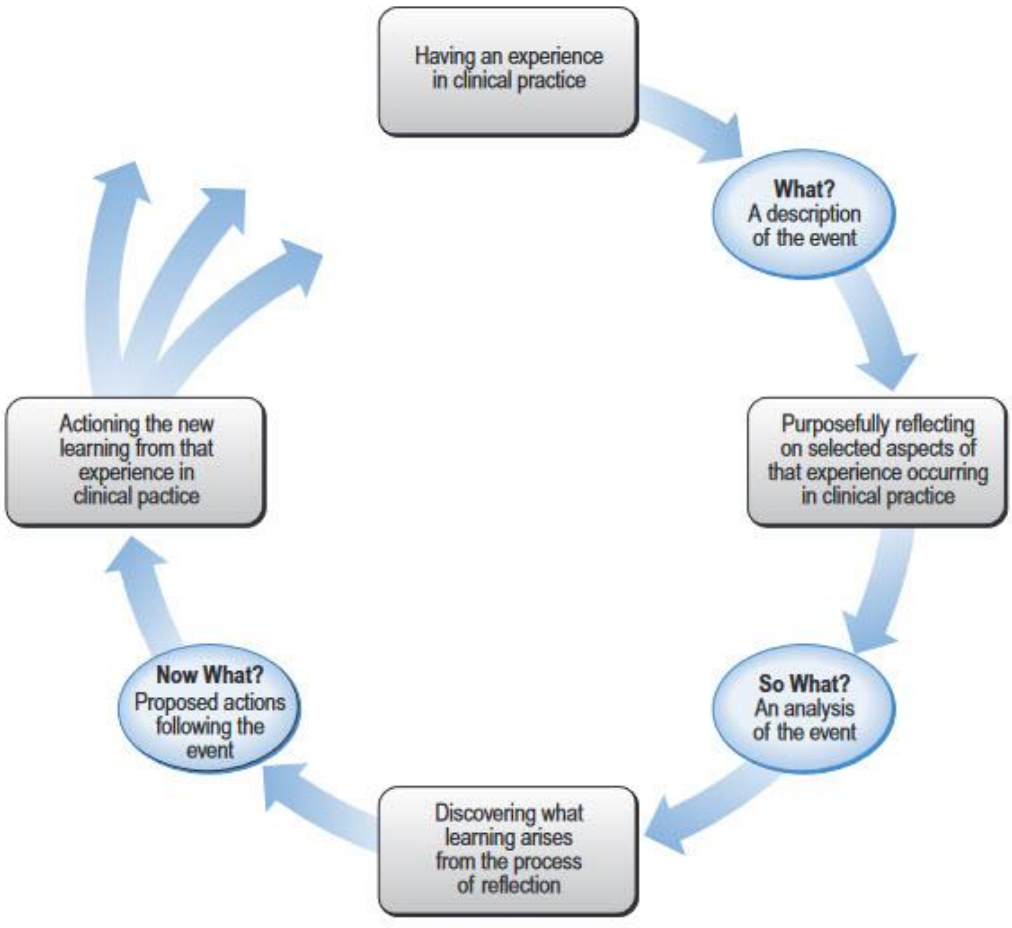


Source: University of Nottingham, UK, n.d., Driscoll by Borton

This model has been adopted for use in a number of different fields. In 1994, Driscoll adopted the three questions as an easy to use reflection model for use in the healthcare field. Subsequently, in 2006, "Driscoll matched the 3 questions to the stages of an experiential learning cycle and added trigger questions that can be used to complete the cycle" (University of Nottingham, UK, n.d., Driscoll by Borton). Following is a diagram of Driscoll's experiential learning cycle for Healthcare.

Figure 9

Borton/Driscoll Model for Healthcare

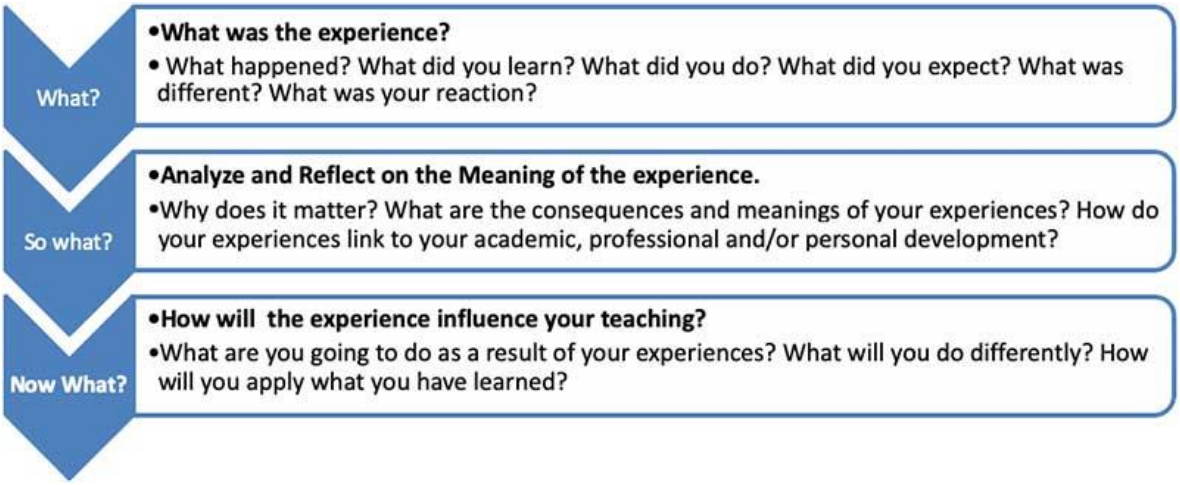


Source: The What? Model of Structured Reflection and its relationship to an experiential learning cycle (Driscoll, 2006, p. 44)

The following is an example of the Borton/Driscoll Model used in education, especially as a guide to help student teachers make meaning of their classroom experiences while beginning their teaching assignments.

Figure 10

Borton/Driscoll Model Sample Reflection Questions for Student Teachers

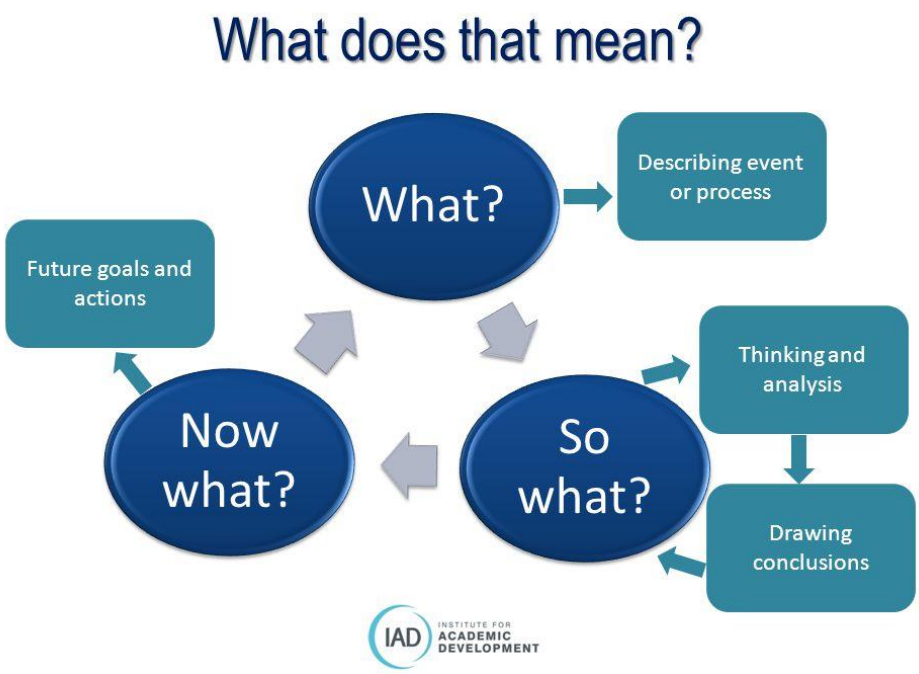


Source: College of Education, University of North Texas, PDS 1/Block B Reflection, Fall 2021 Handbook Professional Development

In addition to healthcare and educational fields, the popular Borton/Driscoll Model is also widely used in corporate training settings. Many feel this model is more user-friendly with the main difference being that it combines both the Reflective Observation and Abstract Conceptualization stages from Kolb's model into one--the *"So What?"* phase. An example of the combined model is shown in Figure 11.

Figure 11

Borton/Driscoll and Kolb Combined Model



Source: Chris Doye, Institute for Academic Development, University of Edinburgh, November 2012

Reflection is a critical part of experiential learning. Once the learning outcomes and assignments have been mapped out clearly, then it's important to give structure to the reflection process. As John Dewey advocated: We do not learn from experience. We learn from reflecting on experience. (1933 How We Think, *New York: Dover,* p.78). In other words, experiential learning must involve deliberate, critical reflection to produce actual learning. The desired outcome then can be found in the Chinese Proverb, "Past experience, if not forgotten, is a guide for the future" (Apple, March 27, 2023, China Travel, 150 Best Chinese Quotes and Sayings about Love, Life…).

The goals of reflection include the following:

- Connects experiences in a course
- Connects experiences across courses, semesters, and disciplines
- Builds connection among academic, co-curricular, and lived experiences

In order to make sure the learning outcomes are met, the reflections should be guided by prompts that require the students to actually engage in deep critical reflective thinking. Stock and Kolb (2021) advise, "Opening oneself to experiencing the moment fully through all of one's senses and internal feelings sparks reflection about all of the perspectives and paradoxes inherent in one's situation. This reflection leads to conceptualization and ultimately in action on one's experience" (p. 5). Similar to that of Dewey, Driscoll's updated model (2017) also shows that reflection is an iterative process where the cycle repeats over and over again. Nielsen, Ballantyne, Murad, and Fournier (2022) advise that by combining the Kolb and Driscoll Models, "The two processes create an experience for self-directed learning to inspect, analyze, challenge, transform, and apply behaviours towards desired outcomes" (p.19). Driscoll's work also includes a set of reflection questions designed to encourage more thorough critical reflection. Although created for clinical settings, they can apply to all types of experiential learning. Driscoll's reflection questions are depicted in the following figure:

Figure 12

Driscoll's Experiential Learning Reflection Questions

WHAT
(returning to the situation)

- is the purpose of returning to this situation?
- exactly occurred in your words?
- did you see? did you do?
- was your reaction?
- did other people do? eg. Colleague, patient, visitor
- do you see as key aspects of this situation?

SO WHAT
(understanding the context)

- were your feelings at the time?
- are you feelings now? are there any differences? why?
- were the effects of what you did (or not do)?
- "good" emerged from the situation, eg. for self/others?
- troubles you, if anything?
- were your experiences in comparison to your colleagues, etc.?
- are the main reasons for feeling differently from your colleagues, etc.?

Now What
(modifying future outcomes)

- are the implications for you, your colleagues, the patient, etc.?
- needs to happen to alter the situation?
- are you going to do about the situation?
- happens if you decide not to alter anything?
- might you do differently if faced with a similar situation again?
- information do you need to face a similar situation again?
- are your best ways of getting further information about the situation should it rise again?

Driscoll J. (1994) Reflective practice for practice. **Senior Nurse**. Vol 13 Jan/Feb. 47-50

The reflection process may take a variety of forms including journaling, blogging, discussions (either in-person or written), reflection papers, presentations, videos, etc.

Students should understand the importance of engaging in critical reflection. In order to steer students into deep introspection, specific reflection prompts for each assignment, as well as a list of other reflection questions may help students make sense of their learning.

Giving the students a rubric in the beginning is also important to help them reflect at a deep level and then make connections to their course content and other experiences. The process of strategically and methodically organizing their learning in a manner that helps students realize what they are accomplishing each step of the way leads to very rewarding experiences for students. By implementing these strategies, students develop a deeper understanding of course material and place a higher value on their learning.

Professional Organizations Promoting Experiential Learning

Several professional organizations have been founded to promote the use of experiential learning in educational institutions. Some of the most prominent of these organizations along with their missions are described in the following sections.

National Society for Experiential Education

The National Society for Experiential Education (NSEE), recently renamed the Society for Experiential Education (SEE), was founded in 1971 (Hesser, 2014, p. 151). For the sake of consistency and based upon the sources being cited, the name NSEE will continue to be used for this study. The founders of the National Society for Experiential Education, "came together in the 1970's and 80's to advocate for the infusion of high impact teaching and learning practices into K-16 education" (NSEE, 2023, Heritage Talks).

These educators forged the theoretical and practical paths toward what we call today experiential education. While their early focus was strongly

> upon internships--indeed, NSEE was called the National Society for Internships and Experiential Education until 1992--founding members developed both pedagogical theories and principles of good practice that also sustained service learning, cooperative education, community engagement, education abroad, undergraduate research and other forms of experiential learning that developed in subsequent years (NSEE Heritage talks, 2023).

For example, the mission of the National Society for Experiential Education is *"*to cultivate educators who effectively use experiential education as an integral part of personal, professional, civic and global learning." (National Society for Experiential Education, Vision, Mission, and Goals, 2014). In 1994, the organization developed a set of general goals, eight principles of best practices for all experiential learning activities, and a set of guiding principles of ethical practice which are all based upon Kolb's model. Hessler (2014) lists the goals for experiential education as the following:

NSEE General Goals for Experiential Education

1. Body of Knowledge/Methodology: To acquire, apply, integrate and evaluate a body of knowledge or the methodology of an academic discipline.
2. Competency Development: To develop competencies, both knowledge and skills specific to an occupation, profession, or organizational setting.
3. Appreciation of Differences: To understand differences across cultures, abilities, orientations, and environments; and to develop empathy and skill to navigate among differences.
4. Critical Thinking Skills: To acquire generic academic thinking skills, e.g., analysis, synthesis, stating a problem.

5. Competent Living Skills: To acquire generic living skills, e.g., oral communication, interpersonal interaction, coping with ambiguity, working in groups, goal setting, and time management.

6. Civic Development: To acquire skills needed for effective citizenship.

7. Career Development: To explore career options and acquire documented work experience in an occupation that requires college-level knowledge and skills.

8. Ethical Development: To develop and use an ethical perspective in a complex situation.
(Source: Hesser, 2014, p. 110)

NSEE Principles of Best Practices in Experiential Education

The early leaders recognized the need for consistency in the quality of the hands-on learning experience. Therefore, they developed a set of best practices as a guide for all experiential learning courses. The NSEE Position Statement declares, "NSEE Principles of Best Practices are grounded in experiential education and reflect the primary tenants of the major theorists in the field of experiential learning and teaching" (Hesser, 2014, p. 151). The expectations of the experience and the facilitators of learning are further described in the following:

> Regardless of the experiential learning activity, both the experience and the learning are fundamental. In the learning process and in the relationship between the learner and any facilitator(s) of learning, there is a mutual responsibility. All parties are empowered to achieve the principles that follow. Yet at the same time, the facilitator(s) of learning are expected to take the lead in ensuring both the quality of the learning experience and of the work produced, and in supporting the learner to use

the principles which underlie the pedagogy of experiential education

(Hesser, 2014, p. 149 - 151).

The eight principles of best practices are listed in the following figure.

Figure 13

NSEE Principles of Best Practices for All Experiential Learning Activities

Source: (Hesser, 2014, p. 149-151)

These eight principles are further explained in the following:

NSEE Principles of Best Practices for All Experiential Learning Activities

1. Intention: All parties must be clear from the outset why experience is the chosen approach to the learning that is to take place and to the knowledge that will be demonstrated, applied or result from it. Intention represents the purposefulness that enables experience to become knowledge and, as such, is deeper than the goals, objectives, and activities that define the experience.
2. Preparedness and Planning**:** Participants must ensure that they enter the experience with sufficient foundation to support a successful experience. They must also focus from the earliest stages of the experience/program on the identified intentions, adhering to them as goals, objectives and activities are

defined. The resulting plan should include those intentions and be referred to on a regular basis by all parties. At the same time, it should be flexible enough to allow for adaptations as the experience unfolds.

3. Authenticity: The experience must have a real world context and/or be useful and meaningful in reference to an applied setting or situation. This means that is should be designed in concert with those who will be affected by or use it, or in response to a real situation.

4. Reflection: Reflection is the element that transforms simple experience to a learning experience. For knowledge to be discovered and internalized the learner must test assumptions and hypotheses about the outcomes of decisions and actions taken, then weigh the outcomes against past learning and future implications. This reflective process is integral to all phases of experiential learning, from identifying intention and choosing the experience, to considering preconceptions and observing how they change as the experience unfolds. Reflection is also an essential tool for adjusting the experience and measuring outcomes.

5. Orientation and Training**:** For the full value of the experience to be accessible to both the learner and the learning facilitator(s), and to any involved organizational partners, it is essential that they be prepared with important background information about each other and about the context and environment in which the experience will operate. Once that baseline of knowledge is addressed, ongoing structured development opportunities should also be included to expand the learner's appreciation of the context and skill requirements of her/his work.

6. Monitoring and Continuous Improvement: Any learning activity will be dynamic and changing, and the parties involved all bear responsibility for ensuring that the experience, as it is in process, continues to provide the richest learning possible, while affirming the learner. It is important that there be a feedback loop related to learning intentions and quality objectives and that the structure of the experience be sufficiently flexible to permit change in response to what that feedback suggests. While reflection provides input for new hypotheses and knowledge based in documented experience, other strategies for observing progress against intentions and objectives should also be in place. Monitoring and continuous improvement represent the formative evaluation tools.

7. Assessment and Evaluation: Outcomes and processes should be systematically documented with regard to initial intentions and quality outcomes. Assessment is a means to develop and refine the specific learning goals and quality objectives identified during the planning stages of the experience, while

evaluation provides comprehensive data about the experiential process as a whole and whether it has met the intentions which suggested it.

8. Acknowledgment: Recognition of learning and impact occur throughout the experience by way of the reflective and monitoring processes and through reporting, documentation and sharing of accomplishments. All parties to the experience should be included in the recognition of progress and accomplishment. Culminating documentation and celebration of learning and impact help provide closure and sustainability to the experience (Hesser, 2014, p. 149 – 151).

Principles of Ethical Experiential Educational Practice

In addition to developing the standards for best teaching practices in experiential education, the founders also resolved to promote the highest level of ethical practice among educators. The following provides an explanation:

> Since the founding of the Society, the Board of Directors, staff, and membership have been governed by policies and practices that guide ethical actions, relationships, and decisions. The distinctive purposes and conditions of experiential learning demand that all those involved in the process of learning through experience are held to the highest standards of mutual respect and responsibility, and that ethical behavior is understood and practiced at every level of the learning process. Experiential educators recognize their responsibility to the student, the community, and the learning process…" (Hesser, 2014, p. 151).

NSEE offers guidance regarding ethical practice in the following seven principles of ethical practice.

NSEE Guiding Principles of Ethical Practice

Principle One: Experiential educators uphold the principles of engaged education and democratic societies, the pursuit of truth, and the freedom of students to express their viewpoints, engage in critical thinking, and develop habits of reflection and civil discourse, listening and learning from those whose experiences and values differ from their own.

Principle Two: Experiential educators use recognized, quality standards and practices in the placement and supervision of students engaged in field-based learning experiences and in the creation and maintenance of ethical partnerships with the communities and organizations that host and support these students, maintaining privacy, confidentiality and reciprocity throughout.

Principle Three: Experiential educators recognize the depth of responsibility in teaching and modeling the values, skills, and relationships that foster a spirit of inquiry and fairness without discrimination or disempowerment.

Principle Four: Experiential educators are informed and guided by a body of knowledge, research and pedagogical practices recognized by and specific to the field of experiential education, including reflection, self-authorship, assessment and evaluation, civic engagement, and the development of personal and social responsibility.

Principle Five: Experiential educators are committed to excellence through active scholarship, assessment and instruction, and the creation of shared knowledge and understanding through affiliation with networks and organizations that advance experiential learning.

Principle Six: Experiential educators create informed learning contexts that foster student growth and actualization of potential, achieve academic and civic goals, and reflect excellence in curriculum design and quality.

Principle Seven: Experiential educators are aware of and sensitive to recognized legal, ethical and professional issues germane to the field of experiential education and act in accordance with established guidelines to ensure appropriate practice, for example, *NSEE Principles of Best Practices* (Hesser, 2014, pp. 151-152).

Association for Experiential Education

Similarly, founded in the 1970's, the Association for Experiential Education (AEE) states their mission as the following, "Our community is composed of experiential educators, practitioners, inquirers, researchers, and students with the shared goal of elevating the field of Experiential Education" (Association for Experiential Education, n.d., Our Mission & Values).

The Association for Experiential Education also offers their guidance to educators with the following principals of practice.

The AEE Principals of Practice

- Experiential learning occurs when carefully chosen experiences are supported by reflection, critical analysis and synthesis.
- Experiences are structured to require the learner to take initiative, make decisions and be accountable for results.
- Throughout the experiential learning process, the learner is actively engaged in posing questions, investigating, experimenting, being curious, solving problems, assuming responsibility, being creative, and constructing meaning.
- Learners are engaged intellectually, emotionally, socially, soulfully and/or physically. This involvement produces a perception that the learning task is authentic.
- The results of the learning are personal and form the basis for future experience and learning.
- Relationships are developed and nurtured: learner to self, learner to others and learner to the world at large.
- The educator and learner may experience success, failure, adventure, risk-taking and uncertainty, because the outcomes of experience cannot totally be predicted.
- Opportunities are nurtured for learners and educators to explore and examine their own values.
- The educator's primary roles include setting suitable experiences, posing problems, setting boundaries, supporting learners, insuring physical and emotional safety, and facilitating the learning process.
- The educator recognizes and encourages spontaneous opportunities for learning.
- Educators strive to be aware of their biases, judgments and pre-conceptions, and how these influence the learner.

- The design of the learning experience includes the possibility to learn from natural consequences, mistakes and successes.

Source: *Association for Experiential Education, n.d., Our Mission & Values*

The American Association of Colleges and Universities (AAC&U) & Kuh's High Impact Practices

The AAC&U is another leading national association working to improve the quality of learning in higher education. According to aacu.org, "AAC&U serves as a catalyst and facilitator for innovations that improve educational quality and equity and that support the success of all students." (2023). One well known initiative of the AAC&U is the creation of the Valid Assessment of Learning in Undergraduate Education (VALUE) Rubrics. VALUE is defined as "an authentic approach to assessment designed to articulate and measure the skills, abilities, and dispositions that students need and that policymakers and employers demand." Teams of college and university faculty members from across the United Stated worked together to create a total of 16 rubrics. Additionally, in an effort to make liberal education more applicable to modern day issues, the AAC&U through the Liberal Education & America's Promise (LEAP) initiative developed the following Principles of Excellence. Following are the guiding principles for access, student success and high-quality learning designed for higher educational institutions.

Figure 14
AAC&U Principles of Excellence

Source: Hesser (2014), p.148

Based upon the National Survey of Student Engagement, research by George Kuh (2008) in conjunction with the AAC&U, finds that certain educational practices are much more likely to result in student success than the traditional lecture and test format. Their findings demonstrate that students who are underprepared benefit at an even higher rate than those considered more academically prepared. The following 11 high impact practices have been identified in the following figure.

Figure 15

Kuh's High Impact Educational Practices

Source: Kuh (2008, 2017)

Kuh (2008) stated, "When I am asked, what one thing we can do to enhance student engagement and increase student success? I now have an answer: make it possible for every student to participate in at least two high-impact activities during his or her undergraduate program, one in the first year, and one taken later in relation to the major field" (p. 21). He further emphasizes that ideally students would have at least one high

impact experience during each year in college. Kinzie (2012) points to the educational benefits of HIPs based upon Kuh's research which indicates that HIPs are positively associated with the following outcomes:

- Persistence and GPA
- Deep approaches to learning
- Higher rates of student-faculty interaction
- Increases in critical thinking, writing skills,
- Greater appreciation for diversity
- Higher student engagement overall, and compensatory effects (p. 1).

When looking at what actually contributes to these positive outcomes, Kuh and O'Donnell (2013) reveal that these high impact practices share the following eight key elements:

1. Performance expectations set at appropriately high levels
2. Significant investment of time and effort by students over an extended period of time
3. Interactions with faculty and peers about substantive matters
4. Experiences with diversity, wherein students are exposed to and must contend with people and circumstances that differ from those with which students are familiar
5. Frequent, timely, and constructive feedback
6. Periodic, structured opportunities to reflect and integrate learning
7. Opportunities to discover relevance of learning through real-world applications
8. Public demonstration of competence.

According to the Center for Teaching Excellence at the University of Maryland Eastern Shore (2023), "…these characteristics can be used as principles to guide the design and delivery of nearly every learning experience. Doing so holds promise for reinforcing and amplifying the effects of deep learning and engagement, with particular benefit to underserved student populations.". Kinsey et al. (2020) reminds readers, "It is not enough for institutions to have HIPs. Rather, there should be some assurance that HIP offerings conform to quality standards and that access to quality is equitable" (p. 20).

Experiential Learning Theory & Constructivist Learning Theory

Experiential Learning Theory is very closely related to the Constructivist Learning Theory which holds that individual students construct knowledge based upon their experiences, and students reflect upon their experiences and integrate new knowledge with existing knowledge to actively reconstruct their knowledge base. Constructivist Learning Theory is deeply embedded in works of Dewey. Kurt (2021) advocates, "The theory of constructivist learning is vital to understanding how students learn. The idea that students actively construct knowledge is central to constructivism. Students add (or build) their new experiences on top of their current foundation of understanding." Citing Woolfolk (1993) Kurt adds, "learning is active mental work, not passive reception of teaching" (Educational Technology, 2021, Constructivist Learning Theory, para. 2).

Similarly, Eyler (2009) explains experiential learning is "a process whereby the learner interacts with the world and integrates new learning into old constructs." (p.1). Kurt, (2021) states, "The theory of constructivism has many elements. These principles outline the theory as a whole and how they affect the learning of the students"

(Educational Technology, 2021, Constructivist Learning Theory, para. 4). The following figure describes the main ideas of constructivism, which are also fundamental to experiential learning theory.

Figure 16

Elements of Constructivist Learning Theory

Elements of Constructivist Learning Theory

***Knowledge is constructed*.** Every student begins the learning journey with some preexisting knowledge and then continues to build their understanding on top of that. They will select which pieces of the experience to add, making everyone's knowledge unique.

***Learning is a social activity*.** Interacting with others is vital to constructing knowledge. Group work, discussions, conversations, and interactions are all important to creating understanding. When we reflect on our past experiences, we can see how our relationship with others is directly connected to the information learned.

***Learning is an active process*.** Students must actively engage in discussions and activities in order to construct knowledge. It is not possible for students to take on a passive role and retain information. In order to build meaningful ideas, there must be a sensory response.

***Learning is contextual*.** Isolation is not the best way to retain information. We learn by forging connections between what we believe and the information we have already. Learning also occurs in the situation within the context of our lives, or alongside the rest of our understanding. We reflect on our lives and classify the new information as it fits into our current perspective.

***People learn to learn, as they learn*.** As each student moves through the learning journey, they get better at selecting and organizing information. They are able to better classify ideas and create more meaningful systems of thought. They also begin to recognize that they are learning multiple ideas simultaneously, for example, if they are writing an essay on historical events, they are also learning elements of written grammar. If they are learning about important dates, they are also learning how to chronologically organize important information.

***Learning exists in the mind*.** Hands-on activities and physical experience are not enough to retain knowledge. Active engagement and reflection are critical to the learning journey. In order to develop a thorough understanding, students must experience activities mentally as well.

***Knowledge is personal*.** Because every person's perspective is unique, so will be the knowledge gained. Every individual comes into the learning activity with their own experiences and will take away different things as well. The theory of constructivist learning is based entirely around each individual's own perspective and experiences.

***Motivation is key to learning*.** Similar to active participation, motivation is key to making connections and creating understanding. Students cannot learn if they are unwilling to reflect on preexisting knowledge and activate their thought process. It is crucial that educators work to motivate their students to engage in the learning journey.

Source: Kurt (2021) Educational Technology, Constructivist Learning Theory, para. 5

Probably the most notable difference between experiential learning theory and constructivist learning theory is that of the authority and responsibility of the faculty member. In experiential learning theory, the faculty member is expected to be a facilitator of learning; however, the faculty member still has the ultimate responsibility and authority for the learning process. Whereas, in the constructivist learning theory, the students and the faculty member holds equal power (Kurt, Educational Technology, 2021, Constructivist Learning Theory, para. 5).

Experiential Learning as a High Impact Educational Practice - Review of the Prior Studies

With all the challenges facing higher education today, the researchers, Dunagan & Clayton with the Christensen Institute for Disruptive Innovation (2017) took a look at institutions that have managed to succeed in today's new environment offering suggestions for creating an innovative path forward. According to the authors, "successful innovators focus on solving specific challenges for specific types of students and proactively build their institutional capabilities for innovation" (p.3). The researchers advocate that "technology is enabling a new, disruptive path: simpler, more affordable,

more accessible educational experiences, built in alignment to the needs of the workforce" (p.3). For example, Northeastern University established a coding and analytics boot camp, based upon its expertise in experiential learning. The effectiveness of the program is being measured by the students' workforce outcomes. The University of Wisconsin developed a competency-based degree program to increase accessibility for adult students. Southern New Hampshire University created a competency-based degree program for adult learners in partnership with employers. According to the authors, innovation is continuous and "leaders can successfully harness the tools of innovation, which allow them to not only innovate against today's challenges, but also to embed the capacities to remain relevant and competitive in the future" (p. 33).

Applied Experience/Work-based Learning

Using both anecdotal and survey evidence in the article entitled, *Learning by Doing: The Long-Term Impact of Experiential Learning Programs on Student Success*, Bradberry and DeMaio (2019) study the impact of experiential education in two different programs at California State University, Northridge—the Model United Nations Program and the Judicial Internship Program. The students in the study are juniors and seniors who must submit an application to enroll in the classes. There are no GPA requirements to participate in the program. Researchers collected anecdotal data for several years and developed a survey instrument to determine the long-term impact on student success for students participating in these two programs. The survey was sent to 66 prior Model UN students and 56 students from the judicial internship mostly between the years 2013 through 2016 as well as some who had participated between 2006 and 2013. A total of 62% of the former Model UN students responded along with 59% of the judicial

internship students. The researchers conclude that results of the study "demonstrate that participation in experiential learning programs is correlated with significant gains in the likelihood of attending graduate school, graduation rates, employment outcomes, and the acquisition of relevant skills that are relevant to future career success" (p.102). The authors further emphasize the following:

> While our students often tell us that these programs were life-changing, the survey results presented in this paper provide evidence that in MUN and the JIP, students acquire the critical skills they will need to be competitive, and ultimately successful, in an ever-changing workforce. Notably, each program helps students develop many of the eight key competencies identified by NACE as being integral to "career readiness" among college graduates. (p. 109)

The authors further argue that the student success outcomes resulting from participation in these experiential programs are even more significant due to the demographics of the student population. They note that more than half of their students are Latino/a or African American, and in the most recent freshman class more than 78% were from traditionally underserved ethnic groups. The authors advocate that these results "should be encouraging to other colleges and universities with experiential learning programs and similar student populations, and to similar colleges and universities who are considering adding experiential learning programs to their curriculum" (p.109).

A 2017 study (Bursztyn, Walker, Shelton, & Pederson) consisting of almost 1000 students across five colleges was conducted to determine if using augmented reality field

trips as a form of experiential learning would lead to increases in student learning. The augmented reality field experiences were delivered through mobile device games, apps, and AR field trips. The AR field trips included three main topics normally covered in introductory geoscience courses. These consisted of geologic time, geologic structures, and hydrologic processes of the Grand Canyon. The games may be played in any location, but must be played outdoors in order to provide a more immersive feel. Control groups completed the same pre and post-tests; however, their courses consisted of the traditional lecture/lab format. Findings indicate that gender and ethnicity had no statistical impact on the results. The researchers conclude that "the AR field trip modules proved to increase student interest in learning the geosciences…" (p. 266). The researchers further recommend, "Because these modules have been shown elsewhere to increase student interest in learning the geosciences, we advocate their adoption, leading to increases in student learning" (p. 260).

Smith and Gibbs (2020) analyze the impact of using experiential learning in the form of a stock market trading simulation on student success in a college investments course. The course is a sophomore/junior-level investments course in the Business Administration and Economics Department at Roanoke College in Virginia. Students use the online security trading simulation, StockTrak, on their own computer or device. The simulation provides a real life trading experience behaving just like a standard online brokerage account. The simulation runs over a 10-week period. At the beginning of the simulation, students receive $500,000 in cash that can be invested in stocks, bonds, mutual funds, exchange-traded funds, options, and futures. As the students are rewarded

or punished by positive or negative returns on investment, they learn better ways for balancing risk and rewards as the semester goes on.

As more investing strategies are covered in the class, students can experiment with them in the simulation. Students must meet several guidelines during the simulation such as making at least 2 trades per week and a minimum of 20 by the end of the term. Each position taken in an asset must be a minimum of 5% of total assets and cash cannot exceed 20% of the total portfolio. Other requirements include buying at least one call option or one put option, write at minimum of one call or one put option, buy or sell a futures contract, etc. This study uses a quantitative measurement, by comparing the grades of the students who participated in the experiential simulation versus those who did not.

Results show that students who participate in the trading simulation earned a higher course grade overall and students who participate improved twice as much from their first exam to the overall course grade. A *t* test was run on the data and results indicate performance of those students who participate in the simulation is statistically higher than those who do not participate. The authors conclude, “This study reinforces the existing literature and supports the hypothesis that experiential learning components do aid in student learning” (p. 234).

A study at the University of California sought to determine if field courses could have a significant impact on under-represented demographic groups in the STEM field. According to the authors (Beltran, et al., 2020) “Classroom-based experiential learning opportunities can increase student confidence and academic success; however, the effectiveness of extending learning to outdoor settings is unknown” (p. 5184). The

researchers studied outcomes of students who began college between 2008 and 2019 at the Santa Cruz campus. Comparison between 941 students who participated in field-based courses and 28,215 students who attended only classroom-based courses were reviewed in this longitudinal study. The study revealed that especially for under-represented groups, field courses resulted in higher self-efficacy gains, higher retention, higher GPAs and higher graduation rates. Further, the study found that all demographic groups experienced significantly higher self-efficacy gains in field-based but not lecture-based courses. The authors conclude that "increasing the number of field courses and actively facilitating access to students from under-represented groups can be a powerful tool for increasing STEM diversity" (p.5184).

Bornais, et. al. (2019) took a unique look at the impact of experiential learning on the facilitators of outdoor workshops. The researchers determined that although events are normally planned with the participants in mind, "much could be learned by examining the impacts of experiential education events as professional and educational development for the facilitators" (p. 109). They asserted that although much study has been conducted on the benefits of experiential learning for the participants, little has been done to determine the effects of outdoor experiential learning on the workshop leaders.

This study was based on ten different day-long experiential workshops across Canada held in conjunction with the annual conference of the Society for Teaching and Learning in Higher Education. Participants were post-secondary educators including faculty, researchers, administrators and educational developers, all committed to teaching and learning pedagogy. At the end of the workshop, the participants and workshop leaders were asked to provide a written reflection. Workshop leaders were then asked to

write a comprehensive reflection over all their workshops after the tenth workshop. These reflections were then reviewed for common themes. Although the reflections were written from the perspective of different disciplines, there were five distinct themes. The five themes gleaned from the reflections included 1) interdisciplinary approaches to learning, 2) experiential learning, 3) teamwork and collaboration, 4) the interplay of space, place and identity, and 5) the development of a sense of community. The researchers determined that experiential education could be used to create a significant impact on the professional and educational development for the facilitators. They concluded that "experiential learning can be as beneficial for facilitators as for participants" (p. 107).

Research by Baker and Robinson (2019) focused on Kolb's experiential learning theory vs. the direct instruction model using a group of agriculture students to determine the effect on learning outcomes. The authors assert that agricultural education has embraced experiential learning pedagogy since the early 1900s and agricultural education lends itself naturally to this process. Since the curriculum in agricultural education is intentionally developed to be experiential, this study looked at the learning styles of students to determine if students with different preferred learning styles showed actual differences in comprehension. The concern was that educators could be inadvertently advantaging certain learners based upon the student's learning style.

The KLSI 3.1 was the instrument used to determine individual learning styles. The study used a random sample of students selected from an entire agricultural education program in Oklahoma. Of the 80 participants chosen, 38 were assigned randomly to the treatment group and 42 to the comparison group. Wind turbine blade

design was chosen as the educational content for the experiment. Instruction was delivered in both direct instruction and experiential learning formats. Results indicated a consistent effect where experiential learning revealed higher gains in both practical and creative intelligence measures. However, some students performed better analytically through direct instruction techniques. The authors advise that educators "should be most concerned with learning preferences when asking students to perform analytically (p.25). Educators should consider utilizing both direct and experiential learning teaching methods. The authors conclude, "Whether students learn in the classroom or in the field, there should be opportunities for both intentional reflection and extension through experimentation" (p.24). Since research tell us that a good experiential learning program does also include direct instruction and intentional reflection as part of the pedagogy; therefore, it appears that this study still supports the positive outcomes of experiential learning in all categories.

This 2019 study (Deeken, et al.) sought to determine the different ways in which university libraries contribute to student success. Participating institutions include Boise State University, California State University-San Marcos, North Carolina State University, University of Cincinnati, University of North Carolina at Charlotte, University of Vermont, Virginia Commonwealth University, and West Chester University. Librarians were given a survey regarding student success on their campuses and in their libraries. The responses were in the form of written essays describing their experiences and perspectives. Findings indicate that libraries are especially involved in supporting student success in several important ways including 1) creating academic rapport and a sense of belonging among the students, 2) intentional involvement in high

impact practices, and 3) supporting and furthering experiential learning and creative learning spaces. According to the article, libraries have a responsibility to "move towards a more holistic definition that includes the disposition and habits-of-mind that give students the confidence and sense-of-belonging needed to become a part of their scholarly community and contribute to their larger community"(p. 508). A declaration by the University of Cincinnati says, "Experiential learning serves as a cornerstone of the university's overall mission and success…These efforts result in the university teaching students to acquire and develop life-long learning skills that will produce curious citizens…" (p. 515). They conclude by emphasizing, "A successful student becomes a well-rounded individual who brings liberal arts thinking to real-world experience." (p. 515)

Ezezika (2019) explores the necessity for global health courses and programs to better prepare students through experiential learning. The author quotes Hoffman and Silverberg (2015) as stating, "Experiential learning is relevant to global health education due to the inherent pragmatic nature of the subject" (p. 71). Also quoting Beaglehole and Bonita (2010), the author defines global health as "collaborative transnational research and action for promoting health for all" (p. 71) and (Koplan et al., 2009) strives for "health equity among nations and for all people" (p. 71). Since global health is so closely tied to practice, institutions should provide their students with real-world skills based upon the benefits of experiential learning. According to the article, experiential learning has traditionally been incorporated in the global health curriculum through overseas placements. However, with the risks of this type of experiential learning and the potential for students to be overwhelmed with the expense and planning necessary for

this type of experience, it is important to incorporate experiential learning into the traditional classroom setting of global health programs and courses. The following four-step course design is recommended: 1) Developing the experiential learning goal, 2) Designing the learning outcomes based on the experiential learning goal, 3) Aligning teaching and learning activities with experiential learning outcomes; and 4) Ensuring that assessment/feedback is based on experiential learning teaching/activities. The study focused on 24 undergraduate students over a 12-week course. The findings demonstrate how in using this approach, it is possible to partner with external experts and bring some of the activities from the workplace into the classroom setting. This experience resulted in the ability of students to "develop a nuanced understanding of the skills needed in generating, implementing and pitching technological and social innovations for global health" (p.76).

The goal of the following study by Hammond and Albert (2020) was to determine whether participation in a Model United Nations class affects the self-reported skill development of the students. The study used data from 2011 to 2017 gathered from 83 students who were enrolled in the Model UN class in a public university in the southeastern United States. The authors advise, "Academic institutions and programs are increasingly using experiential learning and simulations with the observation that these pedagogical devices not only facilitate knowledge but they also provide an opportunity for skills and attitudinal development" (p.441). The study was conducted to determine if experiential learning through the Model UN class increased the students' skills in critical thinking, teamwork, problem solving, communication, personal development and application of knowledge. Nine skills areas were measured by a 5-point Likert scale.

After performing t-tests on the data, findings of the study showed that the students' self-reported skills were significantly higher after enrolling in the course than their skills prior to enrolling in the course with a large effect size. Based on the results of this study, the authors recommend that "more Political Science departments should offer simulations and experiential learning devices such as the Model UN to increase student success" (p. 441).

Hoanca and Craig (2019) discusses an industry/education collaboration in Anchorage, Alaska where an experiential learning program in the area of Information Technology is being developed through a partnership of industry professionals, university faculty, and local school district faculty and administrators. Although Alaska has a fairly vibrant IT employment market, it suffers from a severe shortage of IT professionals. To help meet the need, a group of IT employers is working with educators "to better align curriculum with employers' needs and to establish a pipeline in the education system for better recruiting, growing, and retaining technology talent" (p. 232). Educators from both the Anchorage School District and at the University of Alaska-Anchorage were recruited to serve in the program development. Two high school IT courses have been developed including 13 micro-credentials as well as an articulated pathway into university degrees and future plans to push the opportunities down into middle school. According to the article, "Beyond aligning curriculum, attracting more students into the profession requires reaching out to younger learners with information about career choices, with hands-on activities that will engage them, and with a compelling learning roadmap that offers multiple options for every learner's interest, abilities, and aptitudes" (p. 238). Hoanca and Craig conclude by emphasizing the importance of experiential learning and predicts this

strategy will "result in better student engagement, in better matching of employer needs, and in more and better trained IT professionals" (p. 238).

The goal of a study by Hollis and Eren (2016) was to focus on the need for incorporating experiential learning into food science courses. Five core competencies are required for undergraduate food science programs. Those consist of 1) food chemistry and analysis, 2) food safety and microbiology, 3) food processing and engineering, 4) applied food science, and 5) success skills (IFT 2011). Based on earlier research (Morgan et al, 2006), employers ranked success skills at the top of the list for new food science professionals. Student success skills include oral and written communication, critical thinking, problem-solving, professionalism, and team work (IFT 2011). The second most important competency according to employers was applied food science meaning that graduates should be able to "apply their food science knowledge in real-world situations" (Morgan, et al 2006 in Hollis & Eren, p. 109). This means that students should be able to demonstrate "higher order cognitive skills such as analyzing, evaluating, and creating" (Anderson & Krathwohl, 2001 in Hollis & Eren, p. 109).

The study follows a capstone course developed in collaboration with ACH Food Companies, Inc. to address these requirements. The course was first offered in fall 2013 by the Food Science and Technology Department at the University of Tennessee in Knoxville. Students work in groups to develop and create a prototype of a new food product as part of a competition. An addition to the course in 2015 involved students working in small groups to solve a real-world ACH case study. At the end of the semester, students give a PowerPoint presentation for the product development competition. Based upon the evaluation form completed by the students, the course

averaged 4.25 which was between Very Good and Excellent. The course received high scores for the use of class time, the amount of information learned, relevance and usefulness of course content, and grading techniques. The study concludes, "Students felt that they had the opportunity to practice what they learned and develop their own ideas and skills" (p. 113). Due to the success of the course, it became part of the permanent curriculum at UTK in spring 2016 (p.117).

In this 2020 study, Sangpikul reports on the effects of including three different experiential learning projects in a single course. While most studies focus on a single experiential learning project, this study looks at the learning outcomes of graduate students in a marketing course in Thailand. According to the author, "The contribution of this study is to share a unique and creative learning method by integrating three experiential learning projects in a graduate course, and to reveal the key factors that enhance the accomplishments of the students" (p.59). Students must complete three different real-world experiences. The first one requires the students to become knowledge providers, the second project requires the students to become product sellers, and in the third assignment, students become knowledge creators. The author asserts that most of the research has been done on undergraduate courses; however, experiential learning is just as important for graduate students. A total of 32 students were enrolled in the course with most students between the ages of 25-35 years of age. They had already completed 2 prior courses with experiential learning opportunities.

The students were divided into 6 groups for each project. The first project required the students to apply their marketing knowledge to help tourism businesses as a knowledge provider addressing a real-world marketing issue. In the second project,

students became product sellers. This challenged students to create an actual tourism product and generate revenue and profit. For this project, students were evaluated based on feedback from customers, business partners and peer evaluation. The third project required students to produce a research paper and present it at a national conference. The papers were evaluated by both the instructor and from the reviewer comments provided by the conference organizer. Feedback from the students came from a classroom survey, student discussion and interview. The author concludes, "Overall, students strongly agreed that they had the chance to apply their marketing knowledge from the classroom in real business situations, and they gained deeper learning by undertaking the three projects compared to lectures or doing a classroom report" (p. 67). Results confirmed previous research findings, "Experiential learning not only helps to develop students' academic performance and work-related skills, but it also enhances students' self-confidence and a sense of accomplishment." (Kim et al., Sangpikul, 2017 in Sangpikul, 2020, p. 67)

Service Learning/Civic and Community Engagement

The authors (Davis, Lohmeyer & Shonhiwa, 2019), study the impact of peer-to-peer service learning opportunities. Several peer-to-peer learning opportunities are available, such as the Volunteer Income Tax Assistance Program (VITA), a student investment fund, a student fraternity concession business and tutoring services. This study focuses primarily on the benefits of the VITA Program which uses a team of "five students to teach, review, organize, and supervise the work of all the other student volunteers" (p. 177). All participating students must complete a training program and become IRS certified. One faculty advisor oversees the program, however, the goal is for

the program to be completely student run which contributes even more to the benefits of experiential learning. The program consists of four committees which each have a student committee chair leading to even more peer leadership opportunities. The committees include 1) training, 2) on-campus promotion, 3) off-campus promotion and 4) creative designs. According to the article, the students filed more than 1,000 tax returns over a two-year period and generated refunds of nearly $600,000. According to the authors, "the benefits of having students coordinate, train, and review the work of the volunteers for the VITA team include learning more about the tax system, gaining closer relationships with their peers, and developing crucial professional, time-management, and critical thinking skills" (p. 177). They add that the benefits of the peer-to-peer learning to the general volunteers include "feeling more confident about their ability to prepare returns as they are receiving advice from students who were in their place not long ago" (p. 177). Not only do the students benefit from their service learning experience, but the community clients are also extremely satisfied with their services. Survey results from the student volunteers showed ratings of 4.27 to 4.8 regarding their satisfaction about several items based on a 5 point scale. Clients were also surveyed and rated the students between 4.77 to 4.85 on a variety of questions. As a result of the peer-to-peer learning opportunities, students are prepared for the high-pressure and team-centered professional environment that they will be faced with when they enter the workplace.

Fitzgerald, et al. (2016) emphasize the importance of community engagement in the future success of higher education. "With increasing attention being given to the triple bottom line (social, environmental, and financial), it is important to consider how engaged universities will direct resources to create educational programs…" (p. 246).

They also assert, “In addition to systems thinking that encompasses changes in policies and environments, systemic engagement involves collaborative inquiry, support of ongoing learning, emergent designs rather than preset fixed approaches to change, multiple strands of inquiry, and transdisciplinarity.” (Fitzgerald & Zientek, 2015, p. 246 as cited in Fitzgerald, et al., 2016) They argue that the goal should be to change the culture of higher education to embrace the types of scholarship that encourages community engagement to thrive. The authors advise, “Knowledge is central to the function of higher education and is developed in the community as well as on campuses in laboratories, theaters, symphony halls, faculty halls, and classrooms” (p. 251). Finally Fitzgerald, et al. (2016) conclude, “As higher education as a whole continues to articulate its commitment to resolving societal issues, making discoveries usable, and engaging private and public partners in the work, engagement will become more central to achieving those goals” (p.251).

This article (Johnson, et. al., 2019) was based upon best practices of the Oregon State University Extension Family and Community Health program. This program consists of a partnership between the university campus faculty members and the community-based Extension faculty members. The authors advocate using a continuum of experiential learning opportunities to provide real-world, hands-on application of course content for the students in Extension programs across the United States. According to the research, “Providing experiential learning opportunities within Extension for college students generates benefits for multiple parties” (p.1). Students benefit by gaining a better understanding of course material, the Extension county-based faculty receive assistance that allow them to expand their services to the community, and

the university campus faculty members gain through the ability to provide their students multiple opportunities for learning.

The article defines the continuum of experiential learning options as consisting of many different experiential learning opportunities from classroom assignments, special projects, practicum, and finally full internships. For example, one content area could be applied across the continuum of experiential learning opportunities. Therefore, when studying a walking program, the following teaching methods could be used in the continuum: 1) Class Assignment – develop an evaluation plan for the walking program, 2) Special Project – develop a social media plan for the walking program, 3) Practicum – hold focus groups with participants in the walking program, and 4) Full Internship – create neighborhood walking maps and curriculum materials. The authors conclude by advising, "Using a continuum of experiential learning opportunities in combination with best practices to match the needs and time constraints of the student and Extension faculty will facilitate success" (p.5).

Lewandowski, et. al. (2017) explores the partnership between Discovery Charter School of Rochester, New York and the Nazareth College Partners for Learning. The authors include multiple forms of reflection and data documenting the impact of the program on both personal and professional student learning outcomes for the college students, as well as reflections from the Discovery Charter School students describing the impact that the college students had on their learning. More than 135 college students participate each year, 20 of which are placed in the Discovery Charter School. The goal is to increase the academic achievement of the children, while increasing the social awareness and professional skills of the college students.

This program is funded by the federal work-study program and open to all majors. The program is based on a list of critical elements of best practices (Honnet & Poulen, 1989 as cited in Lewandowski, et. al., 2017) which requires 1) clarifying the responsibilities of each person and organization involved, 2) articulating clear service and learning goals for everyone involved, 3) training, supervision, monitoring, support, recognition, and evaluation to meet service and learning goals, 4) providing structured opportunities for people to reflect critically on their service experience, 5) allowing for those with needs to define those needs, and 6) committing to program participation by and with diverse populations.

The program began in 2011 and is assessed through student surveys, formative feedback from community partners, teachers and staff, rubric-based assessments of written reflections and assessment of group discussions and reflective activities each semester. Outcomes for 2014-2015 show that 96.7% of Nazareth College students improved their leadership and professional skills, 100% demonstrated personal growth through their experiences, 98% gained a better understanding of social issues facing the community, and 98.2% of college students improved their ability to build relationships and work effectively with youth and adults with backgrounds and experiences diverse from their own. Children at the Discovery Charter School made comments such as, “they help me learn” and “I feel really safe around our college helpers, and they always help me when I need help” (p. 20). Other benefits include raising the children’s aspirations revealed in comments such as, “I can’t wait to be a college student” (p. 20). The authors attribute the success of the program on four critical roles which work together to foster positive learning outcomes: 1) the Associate Director for the Center for Civic

Engagement, 2) the Student Site Coordinator, 3) the Site Representative, and 4) the Classroom Teacher. They conclude, "These four critical roles provide an efficient, effective network that enhances experiential learning collaborative partnerships" (p. 23).

Misyak, et. al. (2016) tackles the challenge of designing effective assessments to measure learning outcomes in community-based service projects. Recommendations are based upon a 2014 Community Nutrition course at Virginia Tech which incorporates a service-learning assignment. The Academy of Nutrition and Dietetics Council on Future Practice calls for students to be afforded the opportunity to develop critical thinking, leadership, communication and management skills in professional work environments outside the classroom. This parallels the broader call for higher education to expose students to more active, authentic learning experiences. According to the authors, the paper seeks to "illustrate how educators can implement structured, multi-faceted assessment within service-learning using intentionally designed assignments that include multiple points of feedback to students, providing opportunities for reflection and learning" (p. 358). The authors stress the need for both formative and summative assessment and content that "educators must move from *assessment of learning* model to an *assessment for learning* process where assessment is embedded in the education" (p. 359) itself. Using the *assessment for learning* framework, assignments were designed in a continuum with students being able to develop a community nutrition needs assessment and program plan by the end of the semester. VALUE Rubrics are used for authentic assessment of student learning. Community partners are invited to the end of course presentation session and also provide input on student grades. A variety of assessment techniques are recommended such as 1) Prior Knowledge Self-Assessment, 2)

Observations, 3) Discussions, 4) Ticket-out (in) the Door, 5) Minute Paper, 6) 25 Word Summary, 7) Journal, 8) Think-Pair-Share, and 9) Think-Pair-Square-Share. The authors conclude by stressing, "By intentionally switching to an *Assessment for Learning* approach, educators can ensure their assessment strategies not only guide education practice but also serve as a way for institutions to demonstrate their proficiency in meeting the needs of accreditation bodies such as ACEND" (p. 362).

Experiential learning has proven to be effective; however, little research has been done to explain the reasons why. Rayburn, et al. (2018) attempts to discover *why* experiential learning is effective. The research uses Self-Determination Theory in an Integrated Marketing Communication course as a basis for the study. "Self-Determination Theory suggests contextual fulfillment of psychological needs—autonomy, relatedness, and competence—is associated with increased motivation and improved student outcomes" (p. 22). According to the authors, the course was "designed to fulfill psychological needs to test the efficacy of self-determination theory to explain the mechanisms underlying experiential learning" (p. 23). The goal of the research is to answer three questions: 1) can marketing courses be purposefully designed to offer higher levels of psychological need fulfillment compared to prior courses taken, as suggested by self-determination theory, 2) when fulfillment of psychological needs occurs, are desired student outcomes higher compared to more traditional learning design, and 3) which psychological needs relate to which student outcomes? (p. 23).

The study included three sections of a required Integrated Marketing Communications course consisting of juniors and seniors. All three sections were taught by the same instructor for consistent replication. The experiential learning component

was a team-based community engagement service learning project. The autonomy need was fulfilled through student selection of their own teams, partnership with an organization of their choice, and determination of all marketing solutions and creative content. The relatedness need was fulfilled due to a requirement for teams to report meeting times and increase face-to-face interactions, providing some work-time in class with the professor, and the ability to terminate free-riders. The competence need was fulfilled through class discussion of content prior to lectures, lectures to reiterate content and by students completing an independent project applying the course content to create deliverables. A student perceptions survey was used. Results suggest that the self-determination theory is an effective model to begin explaining how experiential learning works. Findings suggest that courses can be designed to meet students' psychological needs. The authors conclude that "Self-determination theory helps explain why experiential learning works by illuminating the relationships between psychological needs and course outcomes" (p. 30).

Edmondson & Matthews (2019) also advocate that one method to help guarantee that marketing students are ready for the workplace is to "create an *entire* marketing curriculum focused on engagement, experiential learning, student reflection and deliverables" (p. 230). With a curriculum-based approach, "content will also no longer be presented in a vacuum but instead course material will be integrated between all of the marketing classes that students take in the program" (p. 230). The authors contend that curriculum-wide approach helps students "bridge the gap between individual courses so that they understand the big picture" (p.230).

Patka, Rieka, and Robbins (2017) explore the use of PhotoVoice in an advanced research methods course for a counselor preparation program at Portland State University. The course provided students with experiential learning opportunities to bolster research competency. PhotoVoice was used as a tool to "promote understanding of research methods in a course designed for doctoral level counseling students and master's level psychology students" (p. 268). The authors include a detailed description of how PhotoVoice was used to "address the gap between practice and research" (p. 268). PhotoVoice was utilized to teach qualitative research methods by having the students actively engaged in the research process. According to the authors, PhotoVoice "is a community-based participatory research method that involves individuals actively making meaning of the world around them" (p. 269).

In an effort to identify concerns, participants take pictures of their everyday lives and the community around them in order to describe community issues and increase awareness. Participants may take photos of whatever they choose and then use the photos to lead a discussion to raise awareness and encourage action. Photos can further be used to bring about desired changes by sharing them with the appropriate social or governmental agencies. Through this process, students served as both participants and researchers. According to the article, the PhotoVoice process involves the following steps: 1) identify a research question, 2) generate a photograph and interpretation, 3) discuss the photographs and interpretations in a group discussion, 4) transcribe group discussions, and 5) analyze qualitative data (p. 273). The process was repeated three times throughout the semester while students learned to code the data and to create open and close-ended questions as appropriate. Students also learned the difference between

quantitative and qualitative data and when it's appropriate to use mixed-method. The authors caution that for the PhotoVoice process to work, all participants must feel comfortable sharing personal information.

The purpose of the study by Skaggs and Graybeal (2018) was to "understand the impacts of the experiential learning and service-learning components on an upper-level criminology course, Police and Society, for students and community partner agencies" (p. 488). Since most of the service-learning in criminology has narrowly focused on understanding the population of incarcerated youth and adults, the authors explain the need for this research in order to understand the different types of community partnership options available for faculty members. In addition, it is important to determine the additional academic, professional and civic benefits that students stand to gain from such courses. The research takes place in a four-year public comprehensive university in the southern United States. Students participated in 40 hours of experiential learning activities outside the normal class hours. Activities included a four-hour ride-along with an officer from each of the four police departments (state, city, county, and university police) during evening and weekend hours, a written and physical agility entrance examination with each community partner, a use-of-force simulation exercise, a teddy bear drive and a police-community relations event with more than 300 community members in attendance.

Evaluations included a comprehensive portfolio with reflections, student evaluations of the officers and officer evaluations of the students. The authors used a qualitative research design conducting focus group interviews with each group of participants. The first group consisted of 18 students and the second group had 5 police

officers from the 4 different police departments. Research indicates that both the students and community partners saw a tremendous value in the learning experience. The researchers conclude, “A particularly noteworthy finding was that both students and community partners held the belief that service-learning represented a gateway experience that would lead to future service and civic involvement by students after graduation” (p. 501).

Study Abroad

Pennings, et. al. (2019) focuses on the use of short-term study-abroad tours as a form of experiential learning for creative industries students. The article uses an online qualitative post-tour survey to determine the various concrete experiences that contribute to student learning during the tours. This study included 17 short term study tours with approximately 200 undergraduate students from a variety of art and design programs at a large Australian university during the 2015 academic year. The tours lasted from two to four weeks in duration. The survey questionnaire included three open-ended questions: 1) Describe the most significant experience you had on this tour, 2) Describe what you least liked about the tour, and 3) Was there anything unexpected that really impacted you on the tour? If yes, please describe (p. 542). These questions were designed to align with Kolb’s experiential learning cycle, especially in learning more about students’ perceptions of their concrete experiences. Finding from the study revealed the students most valued the ability to experience key industry venues, they most disliked travel issues and poor itinerary planning and felt they were positively impacted by unexpected gains in knowledge about their creative industries discipline. The authors comment that “international contexts provide moments when students experience very active learning

and reflect on the learning that will be useful in later life" (p. 547). They conclude by saying, "More research needs to be undertaken to provide pedagogy that enhances student learning in the short-term international study tour context" (p. 552).

Benefits of Multiple Experiential Learning Courses

Weller and Saam (2019) feature an initiative by Indiana University Kokomo (IUK) to provide high impact practices in the form of experiential learning to freshmen students. The project began in 2016 with the goal of enhancing the learning of low income, first generation and students of color who had been generally underserved by higher education. The experiential learning program included such high impact practices as "first-year seminars, internships, community learning, collaborative projects, and capstone seminars, as well as other forms of active, transformative learning, such as retreats, domestic travel, and career development" (p. 86). Students complete at least one experiential learning activity in their freshmen year and then at least one experience per year for the following three years. Through the experiential learning program, students develop a strong relationship with faculty members and peers and gain important skills such as critical thinking, teamwork, taking initiative and engaging in service. During this process, students gain confidence in their own skills and decision making abilities.

The Experiential Learning Academy at IUK was developed to focus on faculty engagement to address unmet student learning needs by incorporating high-impact experiential learning opportunities across the curriculum with a focus on first-year, general education courses. The goal is to capture those students who may not yet have declared a major and would otherwise not have the opportunity to engage in experiential learning activities. The institute focused on using four evidence-based techniques for

teaching first-year courses including 1) First-Year Seminars and Experiences, 2) Collaborative Assignments and Projects, 3) Diversity/Global Learning, and 4) Service Learning, Community-Based Learning (p. 88). The following general education courses were revised to include an experiential learning component: 1) Introduction to American Criminal Justice – Mock Trails, 2) Introduction to World Masterpieces – Analyzing Social Reactions to Murder, 3) Introduction to Drama – Students Teaching a Community Play, 4) Elementary Composition – A Blog for Student Writers, 5) History of Western Civilization – Reacting to the Past, 6) Introduction to Philosophy – Communities of Inquiry, 7) Introduction to Psychology – Taking Sides, and 8) Introduction to Sociology – Text to Life and Group Deviance Project. Weller and Saam conclude, "The culmination of the high-impact experiential activities … has left students with a greater understanding of the college experience, and enhanced confidence to accomplish their goals. If you provide students with meaningful purpose and the tools for exploration and discovery, they will exceed expectations…" (p 94).

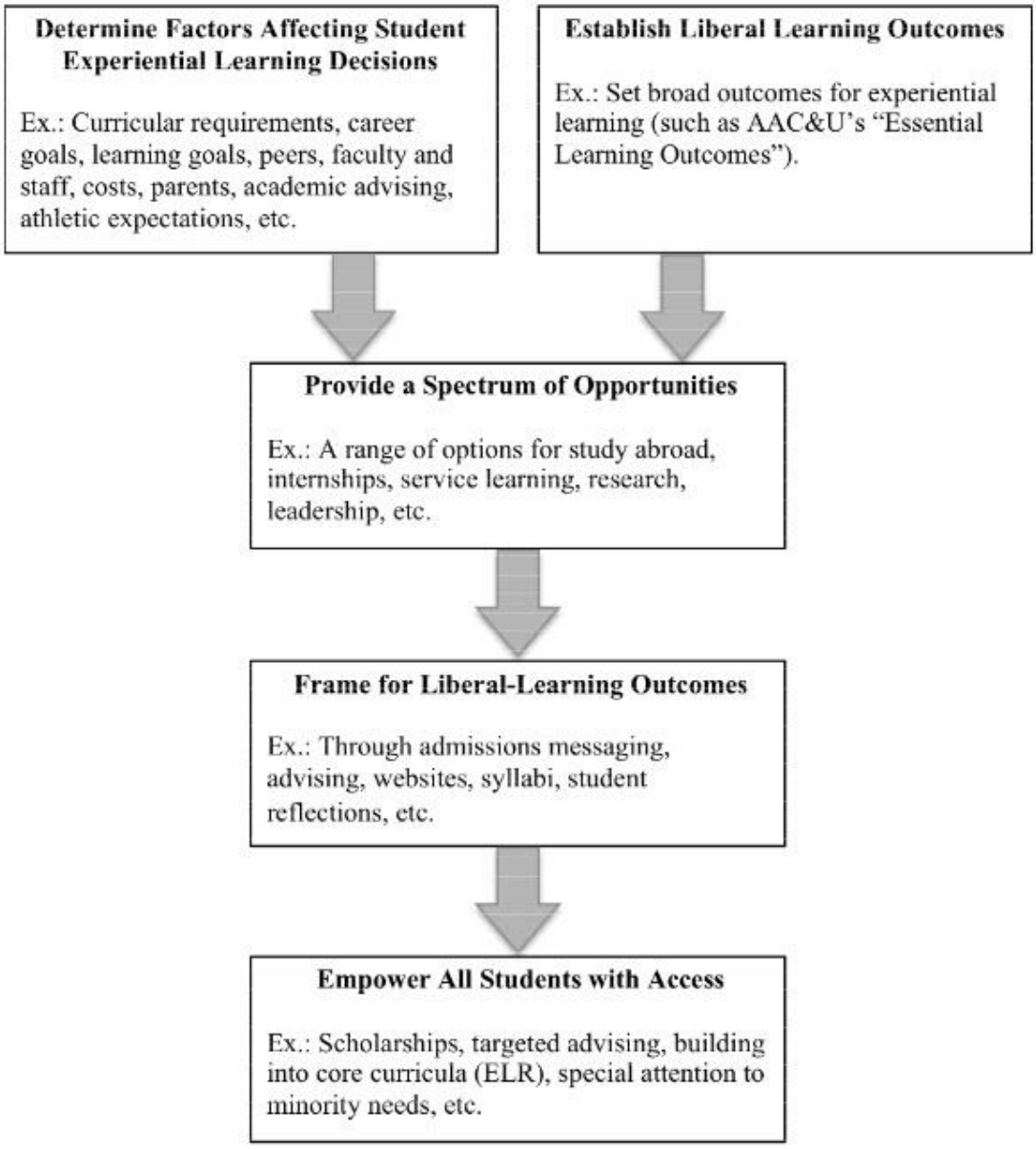
This 2015 study conducted by Coker and Porter at Elon University was performed to determine if students would benefit from increasing the experiential learning requirement from one course to two or more. The university had required one experiential learning course since 1994, but were interested in investigating the benefits of additional experiential requirements. In other words, would two or more courses in experiential learning lead to better student outcomes than doing only one? The results were a resounding "yes". The researchers found that both learning and career development were significantly enhanced by doing more experiential learning. "For example, students with average GPAs who did only one experience were 33 percent less likely to have a job at

graduation and 26 percent less likely to be accepted to graduate or professional school than similar graduates with more experiences" (p. 67). Additionally, career development benefits rose proportionately with each additional experience. For example, approximately 65 percent of students reported career development benefits after one or two experiences, almost 85 percent of the students reported career development benefits after three experiences, 90 percent after four experiences and 100 percent of the students reported career development benefits after five experiential learning opportunities. Interestingly, many students reported altering their future plans after multiple experiential learning opportunities. After one or two experiences, approximately 55 percent of students changed their future plans, 65 percent of students with three experiences, and 85 percent of students with four or more experiences changed their future plans.

The best practices that were determined to improve teaching and learning included the following: 1) provide a spectrum of experiential-learning opportunities, 2) frame experiences for broad liberal-learning outcomes, and 3) provide all students with access to each type of experience. The authors recommend, "Maximizing experiential learning for student success requires acknowledging student diversity and then responding with appropriately diverse experiential learning opportunities" (p. 70). The researchers also found that "Students who were aware of a broader set of potential learning outcomes had more engagement, learning, and transfer of that learning" (p. 66) Coker & Porter recommend the following process for maximizing experiential learning for student success.

Figure 17

Roadmap for Maximizing Experiential Learning For Student Success



Source: Coker & Porter (2015), p. 69

Ely's 2018 study at the University of Susssex, Brighton, UK examines the role of experiential learning in higher education as it relates to sustainability, as well as

evaluating different teaching and learning techniques that can be used to achieve this goal. The study consisted of questionnaire type surveys conducted over a seven year period with students from an international master's-level course. Based on Kolb's theories, this study evaluates the different types of experiential teaching and learning activities used in the classroom including role-play, case studies, and sessions based on sharing and reflecting on personal professional histories. According to the findings of the study, "the qualitative data and discussion illustrate the utility of experiential learning approaches in post-graduate education for sustainable development, especially in generating empathy and understanding for different sustainability perspectives and priorities from around the world" (p.1204). Ely proffers that these insights are valuable to education; because, they can inform the design of teaching and learning activities "that are capable of equipping students with not only the analytical skills for career success but also the inter-cultural sensibility required for international leadership …" (p. 1204).

TBR Data on Student Success in Experiential Learning

Beginning in 2016, a statewide program led by the Tennessee Board of Regents (TBR) was launched to promote high impact practices (HIPs) in the thirteen Tennessee Community colleges. These high impact practices included several types of experiential learning courses including service learning, work based learning, study abroad, and undergraduate research. (TBR, December 2021, p.5) Several research studies have since been conducted to determine the effects of specific HIPs on students at these community colleges. To date, TBR has conducted studies regarding the impact of specific experiential learning HIPs including internships, service learning, and undergraduate research.

A Tennessee Board of Regents study entitled, Student Engagement & College Outcomes: Evidence from the CCSSE at TBR Community Colleges (February 2021), utilized data from the 2017 & 2019 administrations of Community College Survey of Student Engagement to determine the relationship between HIPs and student success. The number of students surveyed in 2017 was 10,663 with an analytic sample of 3,497. The 2019 survey consisted of 10,231 students with 3,993 students in the analytic sample. Students who were included in the analytic sample provided student ID numbers which were matched with both the TBR and NSC data. According to this study the students who participated in an internship or field study course had a greater likelihood of earning a degree than students who did not participate. Significantly, "The odds of graduation are 2.8 times that of other students" (p. 41).

A December 2021 empirical system-wide and longitudinal investigation by TBR examined the effect of service learning participation on college outcomes In particular, this study looked at the effect of participation in service learning courses on college "completion, transfer to university, academic performance, and time to graduation" (p. 5). In addition the study investigated whether or not the duration and frequency of service learning participation have an impact. In order to make adequate comparisons, a standard definition of service learning was developed, along with a taxonomy of service learning durations. SL-1 consists of less than 10 hours of service learning, SL-2 is 10 to 19 hours of service learning and SL-3 consists of 20 or more hours in the service learning experience.

A cohort of first-time freshmen were followed in a longitudinal study over a four year period or 12 calendar semesters from fall 2017 through summer 2021. A total of

21,578 students were included in the cohort with 5,057 students participating in service learning courses. Findings of the study conclude that service learning "participation is associated with a higher probability of graduation and transfer, higher cumulative GPA, and faster progression to graduation" (p. 65). In addition, the results improve significantly with an increase in service learning duration and frequency.

A follow-up study conducted by the Tennessee Board of Regents (Leming, Gorbunov, & Tingle, 2023) regarding the effects of service learning on college outcomes of the 13 community colleges in Tennessee again found statistically significant differences between the graduation rates of the students who participated in service learning experiences and those who did not participate. In addition to data gleaned from the TBR student system, the researchers also used data from THEC, TSAC and the National Student Clearinghouse in order to make appropriate statistical comparisons. The original study tracked the 2017 cohort over 12 semesters running through summer of 2021. This study updated the data through summer of 2022 and added the 2018 freshmen and tracking them through summer of 2022. Therefore, the 2017 cohort consisted of 15 terms and 5,068 participants. The 2018 cohort covered 12 terms and 4,855 participants. Approximately 23% of freshmen from both cohorts participated in at least one service learning experience.

The investigators found that 43% of the students who participated in service learning graduated, as opposed to only 27.4% of the students who did not participate in service learning. In addition, service learning participants have higher GPAs, than the comparable group of nonparticipants and the effect increases with increased levels of participation. Therefore, the overall finding is that service learning participation and its

duration and frequency are positively related to academic performance. In addition, participants had a much higher predicted probability of earning a degree than similar non-participants. Students participating in any service learning activity had an 18% higher chance of graduating than non-participants, and there is an increased likelihood that students will graduate with each subsequent duration level. For example students participating in SL-1 were 14% more likely to graduate, those with SL-2 were 18% more likely and those with more than 20 hours or more (SL-3) were 35% more likely to graduate. Significantly the study found that the probability of graduation for students with any ACT score was much higher among service learning participants. Similarly the likelihood of graduation increases with each frequency level of participation. For instance, students who participate in one service learning course is 16% more likely to graduate, two service learning courses are 26% more likely to graduate while students who take three or more service learning courses are 32% more likely to graduate. In looking at the amount of time it takes students get to graduation, the researchers found for SL-1 the probability was 10% higher, for SL 2, the probability is 19% higher and that the longest service learning duration, SL-3 at 84% higher, greatly expedites progression to graduation. Therefore, service learning participants have higher odds of faster graduation.

Further, participation frequency is also positively related to faster graduation. There is a noticeable increase in the likelihood for faster graduation as you increase from once to twice for any service learning and for duration level 1 and 2. Overall service learning participation accelerates progression to graduation. Participants have higher odds of graduating in every given semester than similar non-participants. Furthermore, service

learning participants are more likely to transfer to university than similar non-participants. The probability of university transfer for any service learning is 7% increase. SL-1 is 5% higher and SL-2 is 11%. SL-3 was not statistically significant due to a smaller sample size. Furthermore, the likelihood of transferring to a university is higher for service learning participants across all ACT scores. In addition, frequency of service learning participation is associated with higher chances of university transfer.

Researchers also found that participants in any service learning show a lower probability of dropping out when compared to similar counterparts among non-participants. SL-1 is 13% less likely to drop out, SL-2 is 17% less likely to drop out and SL-3 is 36% less likely to drop out. Probability of dropping out also decreases with a rise in frequency of service learning activities. For participating in any service learning once is 16%, twice is 24% and three times or more is 32% less likely to drop out. Service learning participants are less likely to drop out in any term. Participants in any service learning are 42% less likely to drop out in each term. There is an association between longer duration and lower probability of dropping out in a given semester. Participants in the longest service learning experience, SL-3, are 71% less likely to drop out in each term than similar non-participants. The same also holds true for the number of times that students participate in service learning activities. For example, students who participated twice are 54% less likely to drop out each term. Non participants are least likely to remain enrolled in each term. The researchers advise that the key takeaways from this study are 1) Service learning participation leads to higher GPA, higher probability of graduation and transfer, faster progression to graduation, and better persistence. 2) Results improve with increase in frequency and duration of service learning, and 3)

Effect sizes are substantial. The conclusion is that faculty's work in service learning matters on a large scale and highly impacts student success.

Finally, a January 2022 study by TBR examined the impact of undergraduate research on student outcomes. This study investigates, "whether student participation in undergraduate research…has an effect on 1) academic performance; 2) probability of graduation, university transfer, and student departure; and 3) time to completion, transfer, and departure" (p.4). This study tracks the 2017 freshman cohort over twelve calendar semesters utilizing data from the Tennessee Board of Regents and the National Student Clearinghouse. During the four years, 3,300 of the 21,578 students in the cohort participated in undergraduate research. This study finds that students participating in undergraduate research have higher graduation numbers, higher rates of university transfers, and more students still enrolled at the end of the observation. Furthermore, fewer students dropped out or stopped out as compared to non-participants. According to the investigators, these results hold true for all undergraduate research students and each frequency level of participation. According to the authors, "We find that participation in the undergraduate research HIP is significantly related to most outcomes of interest: final cumulative GPA, the probability of graduation, transfer, and departure; and time to transfer and departure" (p.5).

Experiential Learning Scholars Program at MTSU

Beginning in 2004, a committee of innovative, interdisciplinary faculty, staff and students began researching experiential learning as a topic for the upcoming Quality Enhancement Plan (QEP) as required by SACSCOC for accreditation purposes. The initial committee included: 14 faculty members representing all colleges of the university,

9 mid-level administrators representing all divisions of the University, 1 vice president, 1 academic dean, 1 secretarial staff member, 1 alumni member, 1 community member, and 3 students. By the end of the QEP, there were 50 members and 7 ex officio members.

Their research indicated that experiential learning was a highly impactful method for enhancing students' academic success, which is the ultimate goal of the QEP. The program was intentionally developed to be replicable and scalable, and after more than two years of research and detailed program design work, the EXL Scholars Program was approved for implementation. In 2006, MTSU launched the EXL Scholars Program with the following mission:

> Students who participate in EXL through the completion of hands-on learning projects in their classes, external service-learning, internship activities, and/or campus community service projects will be better equipped to *live productively* and to *think logically, critically, and creatively*. The EXL students should also acquire the skills to be active participants *as citizens in the global community* and *should acquire a working knowledge of a discipline or group of related disciplines.* (EXL QEP. 2006)

The following definition of experiential learning was adopted for the EXL Scholars Program :

> Experiential learning is defined as, that learning process that takes place beyond the traditional classroom and that enhances the personal and intellectual growth of the student. Such education can occur in a wide variety of settings, but it usually takes on a 'learn-by-doing' aspect that engages the student directly in the subject, work, or service involved (Experiential Education in the College of Arts and

Sciences, Northeastern University, 1997 as cited in Katula & Threnhauser, 1999, p. 240).

Experiential Learning, when done well, offers many benefits to both the students and faculty members. Students are able to apply theories to practice, gain professional work experience and networking opportunities, increase self-confidence, and enhance their resume. Faculty members also benefit as students become more engaged learners, faculty have the opportunity to interact with professionals in their field, and use their courses toward research, tenure/promotion, and public service.

The comprehensive, university-wide Experiential Learning (EXL) Scholars Program at MTSU brings together several different types of experiential learning courses under one umbrella with a set of common student learning outcomes and a consistent application process for the EXL designation. EXL designated courses range from courses with one hands-on project or assignment to a course with a series of hands-on assignments or even a semester-long or multi-year project. Course types include Applied Experience, Co-op/Internship, Creative Activity, Service/Civic Learning, Study Abroad and Research. As a result of their EXL experiences, students should meet the learning outcomes defined in the EXL Program. At a minimum all experiential courses must offer students a hands-on opportunity for engaging in the subject matter and participating in systematic critical reflection, as well as meeting at least two additional SLOs. All designated courses in the EXL Scholars Program incorporate a variety of Kuh's High Impact Practices (Rost, Swayze, McCormick, 2023). EXL courses also embed the National Association of Colleges and Employers (NACE) Career Readiness

Competencies into the assignments. These competencies are illustrated in the following figure:

Figure 18

NACE Career Readiness Competencies

Source: National Association Colleges and Employers, 2021

According to NACE Trending Data for 2023, 61.4% of employers are seeking evidence of candidates' problem-solving skills, and are projecting a 9.1% increase in intern hiring. (National Association of Colleges and Employers, March 2021, Competencies for a Career-Ready Workforce).

EXL Scholars Program: Types of Experiential Learning Courses

Experiential learning takes many forms. The EXL Scholars Program designates experiential learning courses according to the following:

Applied Learning – An applied learning course requires the application of discipline related knowledge through projects with businesses and non-profit organizations; a service learning component is not required.

Service/Civic Learning – A service learning course is defined as a student centered teaching method that involves academic instruction in partnership with MTSU and the larger community. The primary focus of service-learning is to enhance critical and reflective thinking and civic responsibility. Service-learning programs involve students in organized community partnerships that address local needs while developing their academic skills and sense of civic responsibility and community. Service learning courses must include the following student learning outcome: *Students must make contributions to their communities and learn the value of making these contributions (good citizenship).*

Study Abroad – A study abroad course is defined as Kentucky Institute for International courses (KIIS), Cooperative Center for Study Abroad courses (CCSA), and formal study abroad courses developed and led by MTSU faculty. Other types of study abroad courses approved by the MTSU International Education and Exchange Office and the academic department are also acceptable.

Internship – An internship course includes work experiences with businesses or non-profit organizations that require discipline-based knowledge. Academic departments will provide a list of responsibilities and expectations to the internship companies.

Cooperative Education – A cooperative education course includes work experiences with businesses or non-profit organizations that require discipline-based knowledge. Academic departments will provide a list of responsibilities and expectations to the companies.

Creative Activity – A creative activity course is defined as activity that is driven by the student's imagination, talents, and/or skills that results in a tangible outcome such as works rendered in aural, visual, physical, written word, electronic media, and/or other forms. Performance and exhibition of creative works may also be included.

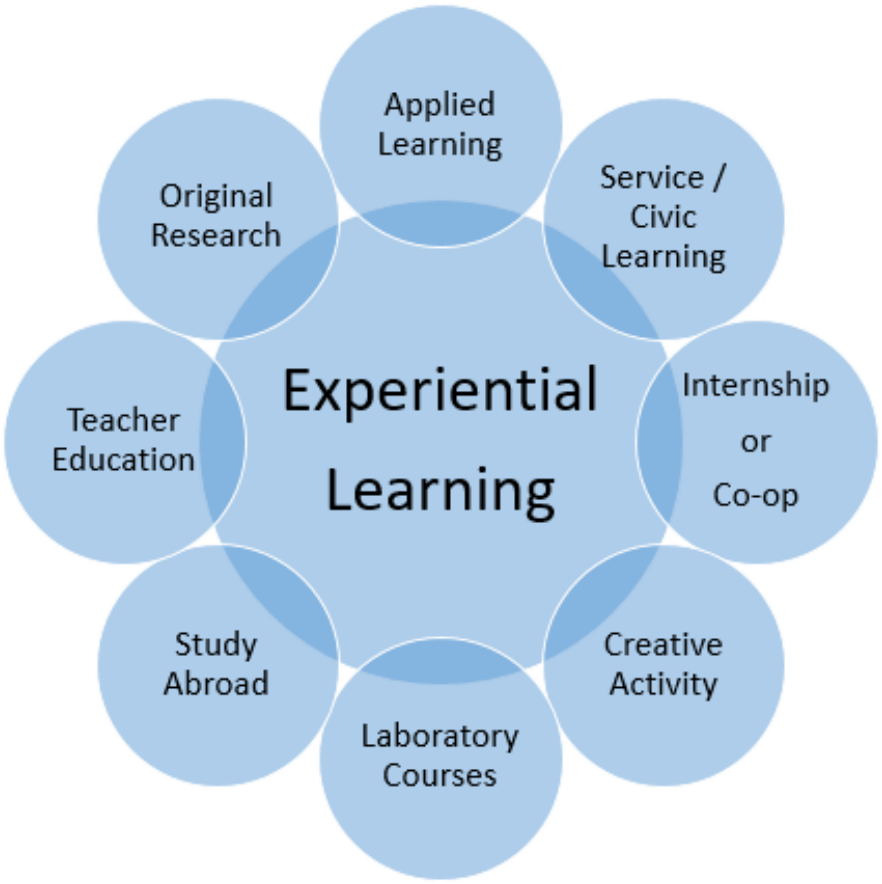
Teacher Education – Teacher education classes are defined as applied learning courses designed specifically for teacher education programs. In addition to the general course requirements for all EXL courses, EXL teacher education courses must require a minimum of 20 in-class hours of elementary/secondary school experience and include a service-learning component with at least 6 hours of service spent on this activity.

Applied Lab Course – Applied laboratory courses are defined as traditional and applied science laboratory course activities such as biology and physical science. Just completing a required lab component for a course is not enough to receive EXL credit. Laboratory courses in the student's major, minor, or general education requirements may be counted for EXL credit. The reflective journal will include a log of activities and the log must connect lab activities with real world application/experience which may include special activities outside scheduled laboratory times.

Original Research – Research is defined as an approved formal research study completed through an academic department, Honors College, or Undergraduate Research Initiative as a formal thesis requirement within a major or as an independent study class.

Figure 19

Experiential Learning Scholars (EXL) Program Course Types



Source: MTSU EXL Scholars Program (QEP, 2006)

In the original QEP, the university identified a total of seven student learning outcomes (SLOs) that should be met through participation in the EXL Scholars Program. Faculty members wishing to have their courses officially designated as experiential learning (EXL) are asked to submit an application identifying how students will meet these learning outcomes as a result of taking their courses.

EXL Program Student Learning Outcomes

Class criteria for All EXL classes:

1. The course meets the following EXL student learning outcomes:

    - Students will develop an experience-based knowledge of their disciplines and demonstrate the ability to apply theories and concepts to practical problems.
    - Students will engage in systematic reflection and demonstrate the ability to critically examine their experiences and to create connections between those experiences and disciplinary knowledge.

2. The course meets **two** of the additional five EXL student learning outcomes listed below:

    - Students will develop and demonstrate managerial skills including planning, organizing, problem solving, and communicating.
    - Students make contributions to their communities and learn the value of making these contributions (good citizenship);
    - Students will develop as individuals including understanding the needs of others, learning cultural awareness, and appreciating the differences in others.
    - Students will develop and demonstrate leadership skills including interpersonal skills, ability to direct others, and teamwork.
    - Students will develop and demonstrate research skills that will help them be successful in graduate programs.

3. The final class product includes reflective activity that requires a personal reflection component.

By integrating these learning outcomes, students develop a deeper understanding of course material and place a higher value on their learning. For example, in their final reflection papers, students consistently talk about what a transformative experience they have had, how much they enjoyed the course, how much they learned as a result, and how they will be able to apply this new knowledge even after the course is over. Student achievement is evidenced by overall higher graduation rates and consistent program growth. For example, in Spring 2006 the EXL Scholars Program began with 12 course

sections, 8 faculty members, and 250 students across 6 departments. During the 2022-2023 academic year, the program had 15,153 students enrolled in 950 EXL sections with 399 participating faculty members across more than 50 different departments. Based upon university data, the figures below show the continuous growth of EXL Scholars Program throughout the years from Fall 2006 – Spring 2023. As the following figures demonstrate, program growth was consistent up until the COVID pandemic shut down most in-person experiences. The EXL Program took a small dip during this time and quickly rebounded once the restrictions were lifted. The program has steadily continued to increase until the current time.

Figure 20

Number of EXL Course Sections Offered (Fall 2006 – Spring 2023)

Figure 20 demonstrates the steady growth in the number of EXL course sections offered over 17 year period with the first full year (2006-2007) offering 122 sections. During the 2016- 2017 academic year, there were 613 sections offered and in 2022-2023, the number of sections offered had grown to 960 for the academic year.

Figure 21

Number of Different Faculty with EXL Approved Courses (Fall 2006 – Spring 2023)

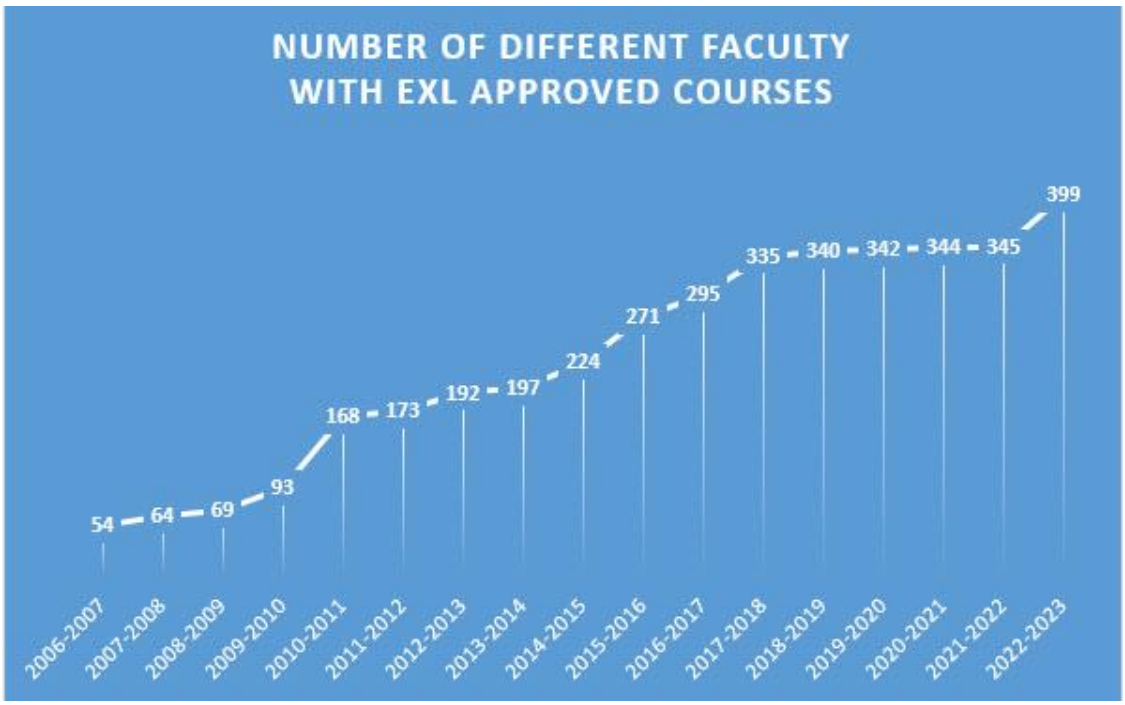


Figure 21 demonstrates the steady increase in the number of faculty members teaching EXL courses. During the first full academic year, there were 54 participating faculty members. In 2016-2017, the number had increased to 295 faculty members and by 2022-2023, there were 399 faculty members offering EXL courses. Of significance is the fact that even during the COVID pandemic, the faculty members remained dedicated to

offering their students experiential learning assignments, and quickly pivoted to redesign courses with hands-on assignments which could be completed remotely.

Figure 22

Number of Students Enrolled in EXL Classes (Fall 2006 – Spring 2023)

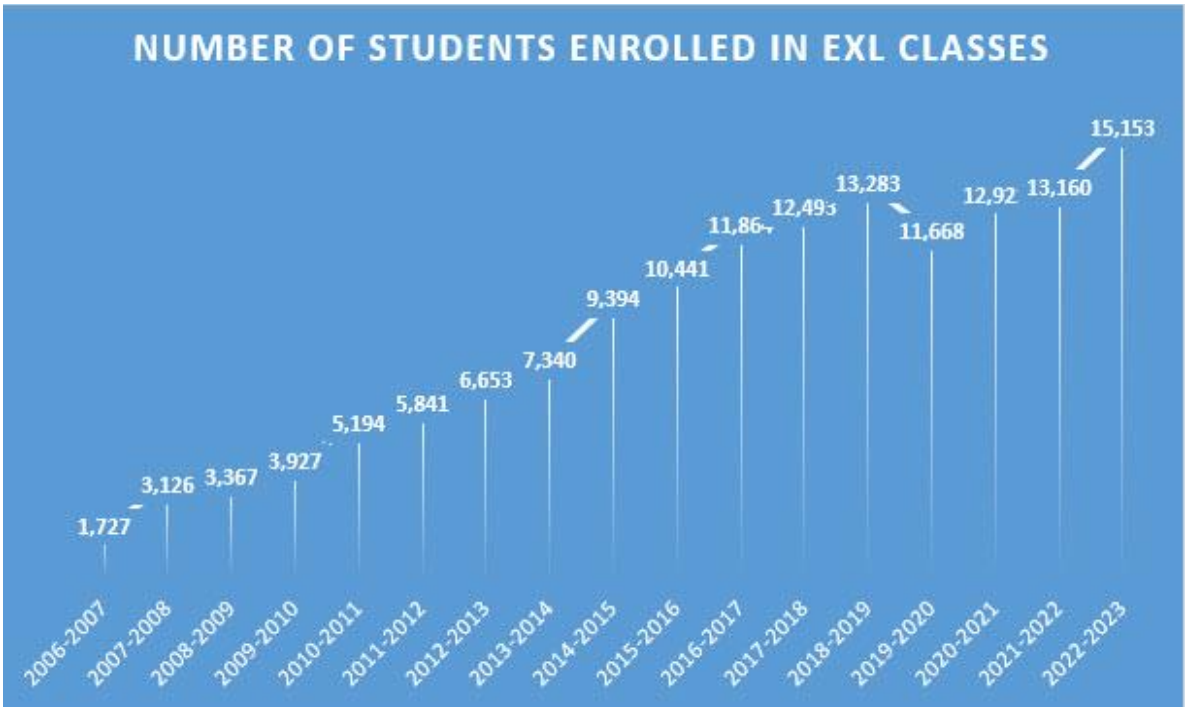


Figure 22 demonstrates the significant increase in the number of students completing EXL courses. For example in 2006-2007, there were 1,727 students enrolled. By 2016-2017, the number of students had risen to 11,864 and in 2022-2023 there were, 15,153 students taking EXL courses.

A 2023 study conducted by Rost, Swayze and McCormick show that students, taking at least one 3-credit hour EXL course, graduate at a percentage rate of 80.63 as compared to students who did not take at least 3 credit hours of EXL coursework who

graduated at only a rate of 39.83. According to the study; therefore, students who take at least 3 credit hours of Experiential Learning coursework graduate at a much higher rate those who do not take at least one 3-credit hour course. Program assessment data also demonstrates the students' positive perceptions of their learning.

Ways Students Can Participate in the EXL Scholars Program

The Experiential Learning Scholars Program provides students with opportunities for hands-on experience in their fields of study, valuable networking with business/organization professionals, and an opportunity to explore career paths through real-world experience. All students are eligible to participate in the EXL program. Each course that is designated as EXL must offer hands-on learning opportunities to every student in the class. Opportunities for participation in the program include the following:

(1) Students may work toward the EXL Scholar Graduation Distinction (on MTSU transcript) by completing program requirements; or

(2) Students may choose take one or more EXL courses, but not be formally enrolled in the EXL Scholars Program.

EXL Scholar Graduation Distinction

Although students are not required to be formally accepted into the EXL Scholars Program in order to take EXL classes, those wishing to graduate with the EXL Scholar Distinction must meet the requirements shown below:

Students wishing to earn the EXL Scholar Graduation Distinction should meet the following:

- Undergraduate Students are required to complete a minimum of 16 hours of EXL designated classes. Graduate Students must complete at least 10 credit hours of EXL designated coursework. This includes the required 1-cr. hr.

EXL 4000 or 6000 Capstone ePortfolio Course. EXL classes include co-operative education/internships, study abroad, applied learning, service-learning, creative activity, teacher education, and laboratory experiences. These courses may be part of required general education, major, and/or minor requirements.

- At least one external activity (project with community organization/business or scholarly research project). Most students will complete their external activity through a class as an applied learning project or a service learning assignment. Students who do not have an external activity in their EXL coursework must either complete an external activity or must complete a formal research project. An external activity is defined as a project that requires the student to interact with people external to the university or a research project where students must interact with people outside their department or outside the campus community. Students may complete the external activity or research requirement in one of the following ways: complete an external service-learning project or internship, actively participate in a regional or national competition as part of a student team, or complete a research project. The formal research project option may be completed through the Honors College, Undergraduate Research Initiative, as a formal thesis requirement within a major, or as an independent study class.

- MTSU internal service component. Students may complete this requirement in one of three ways: participate in a MTSU sponsored charitable activity or service learning project, volunteer with a campus office to assist other students, or be a campus leader. Any verified philanthropic activity completed through a student organization or campus department in which the individual coordinated the event/activity may also be counted for EXL credit.

- Documentation of EXL activities by completing the required 1-credit EXL 4000/6000 e-Portfolio capstone course (counts toward the mandatory credit hours). Students should complete a Student Request for EXL Certification Form (Word or PDF) during pre-registration or regular registration for the semester the student plans to graduate. The form should be filed with the EXL Director no later than the last day to add classes each semester. This form lists the EXL Scholar requirements and provides space for students to document their completion of requirements. Students must complete this form to register for the required EXL 4000/6000 class.

- Participation in program assessment activities

The undergraduate students who complete all the requirements for the EXL Scholar Graduation Distinction receive special tri-color cords to wear at graduation, are

recognized by the University President during the commencement ceremony, and receive an EXL certificate and a special notation on their university transcripts. Graduate students receive an additional honor medallion to wear at the graduation ceremony.

Administrative Support and Public Recognition/Celebration

As advised in the 1986 NSEE publication, Strengthening Experiential Education within your Institution (Kendall, et al), proper support from the university administration is essential to successful implementation of experiential learning programs. With this in mind, the EXL Scholars Program was designed with a dedicated office and funding for mini-grants for faculty/student projects, as well as funding for awards such as Outstanding EXL faculty, student, administrator, and community partner. EXL Grants are awarded for supplies and travel expenses for faculty and students related to an EXL activity. Outstanding EXL Faculty Awards come with engraved plaques and $1,000 in funding to be used for professional development or materials related to experiential learning. Outstanding EXL Student Awards are accompanied by a $500 stipend. Outstanding EXL Administrator and Community Partner Award recipients receive engraved plaques. Award winners are recognized and celebrated at the summer Experiential Learning Institute and Awards Ceremony and through media publicity. (MTSU QEP, 2006) The EXL Scholars Program was intentionally designed to be inclusive of all students. For courses that are designated as EXL, all students in the class must have the opportunity to participate in high impact hands-on experiences regardless of their economic status or demographic category.

Chapter Summary

Considering that research indicates more positive outcomes for students participating in experiential learning strategies than for their counterparts who are not participating in experiential learning, this investigation seeks to determine if there is evidence for encouraging even greater participation and for incorporating additional experiential learning courses into MTSU students' academic advising plans. This is especially important for those underserved populations where experiential learning courses have been found to have a proportionately greater impact than on the traditional student populations (Kuh, 2008).

CHAPTER III.

METHODOLOGY

Subjects

This retrospective, longitudinal study is focused on students in a large, public university in the southeast. According to Johnson & Christensen, (2020), "Retrospective research may be based on actual data collected in the past…" (p. 387). The dataset for this study was obtained from the university's student information system in spring 2021 for the purpose of conducting a baseline study (Rost, Swayze & McCormick, 2023). The original data was obtained in the form of an Argos Report and converted to an Excel spreadsheet. The spreadsheet was then imported into SPSS for data testing.

The subject population consists of four undergraduate cohort groups from 2007 through 2010 using the six-year graduation rate as evidence of student success. The subjects include the entire student population of these cohort periods which totals 33,609 students. This includes all the students who had access to the benefits of the Experiential Learning QEP prior to the implementation of the university's second QEP. These cohort years were purposefully selected to exclude outcomes of additional more recent student support initiatives in order to make a clear distinction between experiential learning outcomes and those of subsequent initiatives.

Appropriate trainings were completed and IRB approval was granted for this study in the spring of 2021 as part of the prior study. The data obtained from the university was analyzed using the SPSS version 27 software. The variables were coded regarding the levels of EXL participation, as well as demographic variables of race and sex. With this non-experimental approach, the researcher does not manipulate variables

in the study (Johnson & Christensen, 2020, pp. 368-369); however, extraneous variables have been accounted for statistically (Johnson & Christensen, 2020, p. 379). Since no personally identifiable information is involved, there is no requirement for informed consent, disclosure, or confidentiality documentation.

Research Design

This retrospective study utilizes existing data; therefore, the research design is nonexperimental. Johnson & Christensen (2020) quote Kerlinger's definition as follows:

> Nonexperimental research is systematic empirical inquiry in which the scientist does not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulable. Inferences about relations among variables are made, without direct intervention, from concomitant variation of independent and dependent variables (p. 368).

Christensen and Johnson explain that one the benefits of using existing data is the speed at which the data can be obtained. Furthermore in many cases, the only ethical or practical way to conduct research is through a nonexperimental design. Ethical considerations may prevent researchers from assigning one group of participants to an experimental group and another group to the control group in the educational setting. In this case, researchers must draw upon existing data and then control for the confounding variables. The nonexperimental design allows researchers to look back to see what occurred in the past, and also offers the ability to observe what happens over time. It allows the researcher to locate relationships among variables, and therefore, is still a very useful form of inquiry. However, there are limitations because "both manipulation of an independent variable and random assignment to groups are missing in nonexperimental

research studies…evidence for causality in nonexperimental research is more tentative, more exploratory, and less conclusive." (Christensen & Johnson, 2020, p. 369) Therefore, the weakness in the nonexperimental design is that the researcher does not manipulate the independent variables and, therefore cannot demonstrate cause and effect relationships.

In this study, archived data is being used to determine whether or not the number of EXL courses taken has a significant impact on the likelihood of graduation. Therefore, the dependent variable is graduation, the independent variable consists of the number of EXL credit hours taken, and the control variables are race and sex. The data was re-coded into numerical form in SPSS in order to run statistical tests. The students were coded as a graduate or non-graduate and EXL or non-EXL. The cohort years were coded into four separate cohorts with the year 2007 assigned the number one, 2008 assigned the number two, 2009 assigned a number three, 2010 was assigned a number four. A typical EXL course usually equals between 3-5 credit hours with most courses being 3 credit hours each; therefore, the number of EXL credit hours was coded into five separate categories (3-5, 6-8, 9-11, 12-14, 15+). Students with 3-5 credit hours were assigned a one, students with 6-8 assigned a two, students with 9-11 credit hours assigned a three, those with 12-14 assigned a four and students with 15+ hours of EXL credit were assigned the number five.

Ordinal variables such as sex and race were converted to interval data for examination. Race was coded in two categories as either Students of Color or White. Students of Color were assigned a one, while White students were assigned a two. Male students were assigned a zero and female students were assigned a one.

Analysis of the Data

To test the hypotheses of the study, the following tests were performed. First a basic descriptive table was generated to show the demographic characteristics of the student population included in the study. A Frequency (or Contingency) table was used to assign a value to the amount of influence our independent variable (EXL) has on our dependent variable (graduation) controlling for the other variables—race and sex. Fields (2018) tells us that a Contingency table contains the number of cases that fall into each combination of categories. A Pearson's Chi-square is utilized to test for an association between items. Therefore, Pearson's Chi-square Tests of Independence were generated to understand the frequencies between EXL participation and graduation variables. According to Fields (2018), the Chi-square test is used to see if there is a significant difference between categorical variables. In Chi-square researchers look at frequencies rather than looking at averages. According to Rost (2023), the Chi-square test statistic is "based on the simple idea of comparing the frequencies you observe in certain categories to the frequencies you might expect in those categories by chance." The following assumptions must be met in order to use Pearson's Chi-square:

- The independent and dependent variables must be categorical
- Independence: each person, item, or entity must contribute to only one cell of the contingency table
- Expected frequencies: no more than twenty percent of expected counts should be less than five.

Chi-square reveals if there is an association between variables. However, going a step farther, the Cramer's V statistic allows a deeper analysis in order to examine the

strength of the association. This then "gives us a very strong indicator as to how much confidence we have in the significance of the Chi-square test result" (Rost, 2023). Cramer's V was therefore used to determine relative strength of the association. To interpret the results of Cramer's V, we consider the following:

.01-.29 = a weak relationship

.30-.59 = a moderate relationship

.60 – 1.00 = a strong relationship

However, McHugh (2013) warns that a limitation of the Cramer's V in testing the strength of association between variables is that it can "produce relative low correlation measures, even for highly significant results" (p. 143). Finally, the *Odds Ratio* was used to calculate the effect size in order to determine the impact or the likelihood of an event occurring. The *Odds Ratio* was calculated for each research question in order to determine the effect size between each group and to analyze the differences related to graduation.

Chapter Summary

This chapter discussed the methodology which was used for this study. The researcher analyzed data from four cohort groups consisting of the academic years, 2007 through 2010 using the six-year graduation rate as evidence of student success. The subjects included the entire student population of these cohort periods which totals 33,609 students. Utilizing the described combination of tests, we are therefore able to more confidently determine if there is a significant association between participation in higher numbers of EXL credit hours and graduation frequency.

CHAPTER IV.

RESULTS

Based upon the increased focus on graduation rates for college students, this study investigates if there is an association between number of EXL credit hours taken and graduation likelihood. Other variables examined include race and sex to determine if there's an association between the student's race and sex and the likelihood of graduation. The dataset obtained from the university consisted of cohort years 2007, 2008, 2009, and 2010 which included 33,609 students. A Chi-square analysis was performed using the provided data. This chapter will demonstrate the statistical methods utilized and present the outcomes of the Chi-square analysis on each of the selected variables. In addition, the researcher performed strength of association and effect size tests for each Chi-square analysis.

Descriptive Statistics

Table 1 depicts the demographic characteristics of participants that took a minimum of 3 or more EXL credit hours, along with their corresponding six-year graduation rate as expressed in percentage. The number of participants who met this criteria equals (n=5,618). The data was categorized by credit hours earned, 3-5 (n=3,205), 6-8 (n=1,050), 9-11 (n=506), 12-14 (n-351), and 15 or more (n=506); by race, students of color (n=1,179) and white (n=4,439); and by sex, female (n=3,174), male (n=2,444).

Table 1.

Demographic Characteristics of Participants that Took a Minimum of 3 or More EXL Credit Hours (N = 5,618)

Characteristic	*n*	*%*
Credit Hours Earned		
3-5	3205	57.00
6-8	1050	20.10
9-11	506	9.00
12-14	351	6.20
15 or more	506	9.00
Race		
Students of Color	1179	21.00
White	4439	79.00
Sex		
Female	3174	56.50
Male	2444	43.50
Graduated		
Yes	4529	80.60
No	1089	19.40

Chi-Square Test of Independence Analysis

Table 2 presents the results of the contingency table used to examine the frequencies of EXL credit hours and student graduation. The contingency table met the Chi-square test assumptions, since each subject contributed to one cell of the contingency table and there were no counts less than five. Analysis demonstrates that there was a very significant association between completed EXL credit hours and graduation, Pearson Chi-square: $X^2(1) = 311.692, p<.001$ *and Cramer's* $V = .236, p<.001$. The likelihood of student graduation showed an incremental significance with each additional level of credit hours completed. While graduation percentage for all students taking only 3-5 hours was 73.6 percent, those taking 6-9 hours was 81.9 percent, 9-11 hours was 94.1 percent, 12-14 hours was 95.4 percent, and 15+ credit hours was 98.4 percent.

While the Cramer's V test indicated a significant but weak association, the Chi-square and odds findings do indicate a very strong association between the number of EXL credit hours taken and the likelihood of graduation. The results of the Cramer's V is not particularly alarming, since a known limitation of this test is that it often shows a low correlation, even when the results are highly significant (McHugh, 2013). The *Odds Ratio* calculation showed the odds of all students who complete 15 or more credit hours of EXL coursework were 22.31 times more likely to graduate than all students completing only 3-5 credit hours; 13.77 times more likely to graduate than all students taking 6-8 hours; 3.92 times more likely to graduate than all students taking 9-11 hours; and 2.97 times more likely than all students taking 12-14 credit hours.

Similarly, all students who completed 12-14 hours of EXL coursework were 7.5 times more likely to graduate than all students taking 3-5 hours; 4.63 times more likely to graduate than all students taking 6-8 hours and 1.32 times more likely to graduate than all students taking 9-11 hours. When comparing all students who took 9-11 EXL hours, those students were 5.68 times more likely to graduate than all students who took 3-5 hours and 3.50 times more likely to graduate than all students taking 6-8 hours. Finally, all students who took 6-8 hours of EXL coursework were 1.62 times more likely to graduate than all students taking 3-5 EXL hours.

Table 2.
Frequencies of EXL Hours and Student Graduation (N = 5,618)

			Graduation		
			No	Yes	Total
EXL Hours	3-5	Count	845	2360	3205
		Expected Count	621.3	2583.7	3205.0
		% within Hours	26.4%	73.6%	100.0%
		% within Graduation	77.6%	52.1%	57.0%
		% of Total	15.0%	42.0%	57.0%
		Standardized Residuals	9.0	-4.4	
	6-8	Count	190	860	1050
		Expected Count	203.5	846.5	1050.0
		% within Hours	18.1%	81.9%	100.0%
		% within Graduation	17.4%	19.0%	18.7%
		% of Total	3.4%	15.3%	18.7%
		Standardized Residuals	-9.0	0.5	
	9-11	Count	30	476	506
		Expected Count	98.1	407.9	506.0
		% within Hours	5.9%	94.1%	100.0%
		% within Graduation	2.8%	10.5%	9.0%
		% of Total	0.5%	8.5%	9.0%

		Standardized Residuals	-6.9	3.4	
	12-14	Count	16	335	351
		Expected Count	68.0	283.0	351.0
		% within Hours	4.6%	95.4%	100.0%
		% within Graduation	1.5%	7.4%	6.2%
		% of Total	0.3%	6.0%	6.2%
		Standardized Residuals	-6.3	3.1	
	15 or More	Count	8	498	506
		Expected Count	98.1	407.9	506.0
		% within Hours	1.6%	98.4%	100.0%
		% within Graduation	0.7%	11.0%	9.0%
		% of Total	0.1%	8.9%	9.0%
		Standardized Residuals	-9.1	4.5	
Total		Count	1089	4529	5618
		Expected Count	1089.0	4529.0	5618.0
		% within Hours	19.4%	80.6%	100.0%
		% within Graduation	100.0%	100.0%	100.0%
		% of Total	19.4%	80.6%	100.0%

Pearson Chi-Square: X2(1) = 311.692, p < .001.
Cramer's V = .236, *p* < .001

Table 3 presents the results of the contingency table used to understand the frequencies of EXL credit hours and graduation among students of color. The contingency table met the Chi-square test assumptions, since each subject contributed to only one cell of the contingency table and there were no counts less than five. Analysis demonstrates that there was a significant association between completed EXL credit hours and graduation, Pearson Chi-square: X2(1) = 247.314, p < .001 and *Cramer's V* = .232, *p* < .001. Student of color who took 3-5 credit hours had a graduation percentage of 72.5 percent, students who took 6-8 hours had a graduation percentage of 81.7, those students taking 9-11 increased to 97.6 graduation percentage. However, at the 12-14

credit hour mark, the graduation percentage went down slightly to 94.6 percentage points and then rose again to 96.8 percent at the 15+ hour category.

The *Odds Ratio* showed the students of color who complete 15 or more credit hours of EXL coursework were 11.41 times more likely to graduate than students completing 3-5 credit hours and 6.71 times more likely to graduate than students taking 6-8 hours. When comparing 15+ hours to 9-11 hours in students of color, the results indicate a leveling off after 9-11 hours. This does rebound after the 12-14 hour level, where students of color taking 15+ credit hours is 1.70 times more likely to graduate than those with 12-14 credit hours.

Students who completed 12-14 hours of EXL coursework were 6.72 times more likely to graduate than students taking 3-5 hours; 3.95 times more likely to graduate than students taking 6-8 hours. Again, when comparing students of color who completed 12-14 hours to students of color who completed 9-11 hours of EXL coursework, students of color with 9-11 hours were slightly more likely to graduate than students of color who complete 12-14 hours.

When comparing students of color who took 9-11 hours, those students were 15.78 times more likely to graduate than those taking only 3-5 hours and 9.28 times more likely to graduate than students taking 6-8 hours. Finally, students of color who took a total of 6-8 hours of EXL coursework were 1.70 times more likely to graduate than students taking 3-5 EXL hours.

Table 3.

Frequencies of EXL Hours and Graduation among Students of Color (N =1,179)

			Graduation		
			No	Yes	Total
EXL Hours	3-5	Count	206	542	748
		Expected Count	158.6	589.4	748.0
		% within Hours	27.5%	72.5%	100.0%
		% within Graduation	82.4%	58.3%	63.4%
		% of Total	17.5%	46.0%	63.4%
		Standardized Residuals	3.8	-2	
	6-8	Count	36	161	197
		Expected Count	41.8	155.2	197.0
		% within Hours	18.3%	81.7%	100.0%
		% within Graduation	14.4%	17.3%	16.7%
		% of Total	3.1%	13.7%	16.7%
		Standardized Residuals	-0.9	0.5	
	9-11	Count	2	83	85
		Expected Count	18.0	67.0	85.0
		% within Hours	2.4%	97.6%	100.0%
		% within Graduation	0.8%	8.9%	7.2%
		% of Total	0.2%	7.0%	7.2%
		Standardized Residuals	-3.8	2.0	
	12-14	Count	3	53	56
		Expected Count	11.9	44.1	56.0
		% within Hours	5.4%	94.6%	100.0%
		% within Graduation	1.2%	5.7%	4.7%
		% of Total	0.3%	4.5%	4.7%
		Standardized Residuals	-2.6	1.3	
	15 or More	Count	3	90	93
		Expected Count	19.7	73.3	93.0
		% within Hours	3.2%	96.8%	100.0%
		% within Graduation	1.2%	9.7%	7.9%
		% of Total	0.3%	7.6%	7.9%
		Standardized Residuals	-3.8	2.0	
Total		Count	250	929	1179
		Expected Count	250.0	929.0	1179.0

% within Hours	21.2%	78.8%	100.0%
% within Graduation	100.0%	100.0%	100.0%
% of Total	21.2%	78.8%	100.0%

Pearson Chi-Square: X2(1) = 247.314, p < .001.
Cramer's V = .232, *p* < .001

Table 4 presents the results of the contingency table used to understand the frequencies of EXL credit hours and graduation among white students. The contingency table met the Chi-square test assumptions, since each subject contributed to one cell of the contingency table and there were no counts less than 5. Analysis demonstrates that there was a significant association between completed EXL credit hours and graduation among white students, Pearson Chi-square: $X^2(1) = 311.692, p<.001$ *and Cramer's V =* $.236, p<.001$. While graduation percentage for white students taking only 3-5 hours was 74.0 percent, those white students taking 6-9 hours was 81.9 percent, white students taking 9-11 hours was 93.3 percent, 12-14 hours was 95.6 percent, and white students taking 15+ credit hours was 98.4 percent. The *Odds Ratio* calculation showed the odds of white students who complete 15 or more credit hours of EXL coursework were 28.63 times more likely to graduate than white students completing only 3-5 credit hours; 18.3 times more likely to graduate than white students taking 6-8 hours; 5.81 times more likely to graduate than 9-11 hours; and 3.76 times more likely than white students taking 12-14 credit hours. Similarly, white students who completed 12-14 hours of EXL coursework were 7.61 times more likely to graduate than white students taking 3-5 hours; 4.82 times more likely to graduate than white students taking 6-8 hours and 1.54 times more likely to graduate than white students taking 9-11 hours. When comparing white students who took 9-11 EXL hours, those students were 4.93 times more likely to

graduate than white students who took 3-5 hours and 3.12 times more likely to graduate than white students taking 6-8 hours. Finally, white students who took a total of 6-8 hours of EXL coursework were 1.58 times more likely to graduate than white students taking 3-5 EXL hours.

Table 4.

Frequencies of EXL Hours and Graduation among White Students (N = 4,439)

			Graduation		
			No	Yes	Total
EXL Hours	3-5	Count	639	1818	2457
		Expected Count	464.4	1992.6	2457.0
		% within Hours	26.0%	74.0%	100.0%
		% within Graduation	76.2%	50.5%	55.4%
		% of Total	14.4%	41.0%	55.4%
		Standardized Residuals	8.1	-3.9	
	6-8	Count	154	699	853
		Expected Count	161.2	691.8	853.0
		% within Hours	18.1%	81.9%	100.0%
		% within Graduation	18.4%	19.4%	19.2%
		% of Total	3.5%	15.7%	19.2%
		Standardized Residuals	-0.6	0.3	
	9-11	Count	28	393	421
		Expected Count	79.6	341.4	421.0
		% within Hours	6.7%	93.3%	100.0%
		% within Graduation	3.3%	10.9%	9.5%
		% of Total	0.6%	8.9%	9.5%
		Standardized Residuals	-5.8	2.8	
	12-14	Count	13	282	295
		Expected Count	55.8	239.2	295.0
		% within Hours	4.4%	95.6%	100.0%
		% within Graduation	1.5%	7.8%	6.6%
		% of Total	0.3%	6.4%	6.6%
		Standardized Residuals	-5.7	2.8	
	15 or More	Count	5	408	413
		Expected Count	78.1	334.9	413.0

		% within Hours	1.2%	98.8%	100.0%
		% within Graduation	0.6%	11.3%	9.3%
		% of Total	0.1%	9.2%	9.3%
		Standardized Residuals	-8.3	4.0	
Total		Count	839	3600	4439
		Expected Count	839.0	3600.0	4439.0
		% within Hours	18.9%	81.1%	100.0%
		% within Graduation	100.0%	100.0%	100.0%
		% of Total	18.9%	81.1%	100.0%

Pearson Chi-Square: X2(1) = 247.314, p < .001.
Cramer's V = .236, *p* < .001

Table 5 presents the results of the contingency table used to understand the frequencies of EXL credit hours and graduation among women. The contingency table met the Chi-square test assumptions, since each subject contributed to one cell of the contingency table and there were no counts less than five. Analysis demonstrates that there was a very significant association between completed EXL credit hours and graduation, Pearson Chi-square: $X^2(1) = 311.692, p<.001$ *and Cramer's V = .236, p<.001*. While graduation percentage for female students taking only 3-5 hours was 77.9 percent, those female students taking 6-8 hours was 82.8 percent, female students taking 9-11 hours was 94.8 percent, 12-14 hours was 96.7 percent, and female students taking 15+ credit hours was 98.2 percent. The *Odds Ratio* calculation showed the odds of female students who complete 15 or more credit hours of EXL coursework were 15.38 times more likely to graduate than female students completing 3-5 credit hours; 11.23 times more likely to graduate than female students taking 6-8 hours; 2.99 times more likely to graduate than female students taking 9-11 hours; and 1.82 times more likely than female students taking 12-14 credit hours. Similarly, female students who completed 12-14 hours of EXL coursework were 8.45 times more likely to graduate than female students

taking 3-5 hours; 6.17 times more likely to graduate than female students taking 6-8 hours and 1.64 times more likely to graduate than female students taking 9-11 hours. When comparing female students who took 9-11 EXL hours, those students were 5.15 times more likely to graduate than female students who took 3-5 hours and 3.76 times more likely to graduate than female students taking 6-8 hours. Finally, female students who took a total of 6-8 hours of EXL coursework were 1.37 times more likely to graduate than female students taking 3-5 EXL hours.

Table 5.

Frequencies of EXL Hours and Graduation among Women (N = 3,174)

			Graduation		
			No	Yes	Total
EXL Hours	3-5	Count	371	1306	1677
		Expected Count	263.1	1413.9	1677.0
		% within Hours	22.1%	77.9%	100.0%
		% within Graduation	74.5%	48.8%	52.8%
		% of Total	11.7%	41.1%	52.8%
		Standardized Residuals	6.7	-2.9	
	6-8	Count	96	463	559
		Expected Count	87.7	471.3	559.0
		% within Hours	17.2%	82.8%	100.0%
		% within Graduation	19.3%	17.3%	17.6%
		% of Total	3.0%	14.6%	17.6%
		Standardized Residuals	0.9	-0.4	
	9-11	Count	16	290	306
		Expected Count	48	258	306.0
		% within Hours	5.2%	94.8%	100.0%
		% within Graduation	3.2%	10.8%	9.6%
		% of Total	0.5%	9.1%	9.6%

		Standardized Residuals	-4.6	2.0	
	12-14	Count	8	238	246
		Expected Count	38.6	207.4	246.0
		% within Hours	3.3%	96.7%	100.0%
		% within Graduation	1.6%	8.9%	7.8%
		% of Total	0.3%	7.5%	7.8%
		Standardized Residuals	-4.9	2.1	
	15 or More	Count	7	379	386
		Expected Count	60.6	325.4	386.0
		% within Hours	1.8%	98.2%	100.0%
		% within Graduation	1.4%	14.2%	12.2%
		% of Total	0.2%	11.9%	12.2%
		Standardized Residuals	-6.9	3.0	
Total		Count	498	2676	3174
		Expected Count	498.0	2676.0	3174.0
		% within Hours	15.7%	84.3%	100.0%
		% within Graduation	100.0%	100.0%	100.0%
		% of Total	15.7%	84.3%	100.0%

Pearson Chi-Square: X2(1) = 163.6651363.963, p < .001.
Cramer's V = .227, *p* < .001

Table 6 presents the results of the contingency table used to understand the frequencies of EXL credit hours and graduation among men. The contingency table met the Chi-square test assumptions, since each subject contributed to one cell of the contingency table and there were no counts less than five. Analysis demonstrates that there was a significant association between completed EXL credit hours and graduation, Pearson Chi-square: $X^2(1) = 247.314$, $p < .001$ *and Cramer's* $V = .232$, $p < .001$. Male students who took 3-5 credit hours had a graduation percentage of 69.0 percent, male students who took 6-8 hours had a graduation percentage of 80.9, those male students taking 9-11 hours increased to 93.0 graduation percentage. Male students who took 12-14

hours had a graduation percentage of 92.6. And finally, male students who took 15+ hours had a graduation percentage of 99.2.

The *Odds Ratio* showed the male students who complete 15 or more credit hours of EXL coursework were 53.60 times more likely to graduate than students completing only 3-5 credit hours and 28.20 times more likely to graduate than male students taking 6-8 hours. Male students who complete 15+ hours are 8.95 times more likely to graduate than 9-11 hours and 9.81 times more likely than 12-14 credit hours.

Male students who completed 12-14 hours of EXL coursework were 5.46 times more likely to graduate than male students taking 3-5 hours and 2.87 times more likely to graduate than male students taking 6-8 hours.

When comparing male students who took 9-11 hours, those male students were 5.98 times more likely to graduate than male students taking only 3-5 hours and 3.14 times more likely to graduate than male students taking 6-8 hours. Finally, male students who took 6-8 hours of EXL coursework were 1.90 times more likely to graduate than male students taking 3-5 EXL hours.

Table 6.

Frequencies of EXL Hours and Graduation among Men (N = 2,444)

			Graduation		
			No	Yes	Total
EXL Hours	3-5	Count	474	1054	1528
		Expected Count	369.5	1158.5	1528.0
		% within Hours	31.0%	69.0%	100.0%
		% within Graduation	80.2%	56.9%	62.5%
		% of Total	19.4%	43.1%	62.5%

	Standardized Residuals	5.4	-3.1	
6-8	Count	94	397	491
	Expected Count	118.7	372.3	491.0
	% within Hours	19.1%	80.9%	100.0%
	% within Graduation	15.9%	21.4%	20.1%
	% of Total	3.8%	16.2%	20.1%
	Standardized Residuals	-2.3	1.3	
9-11	Count	14	186	200
	Expected Count	48.4	151.6	200.0
	% within Hours	7.0%	93.0%	100.0%
	% within Graduation	2.4%	10.0%	8.2%
	% of Total	0.6%	7.6%	8.2%
	Standardized Residuals	-4.9	2.8	
12-14	Count	8	97	105
	Expected Count	25.4	79.6	105.0
	% within Hours	7.6%	92.4%	100.0%
	% within Graduation	1.4%	5.2%	4.3%
	% of Total	0.3%	4.0%	4.3%
	Standardized Residuals	-3.5	1.9	
15 or More	Count	1	119	120
	Expected Count	29.0	91.0	120.0
	% within Hours	0.8%	99.2%	100.0%
	% within Graduation	0.2%	6.4%	4.9%
	% of Total	0.0%	4.9%	4.9%
	Standardized Residuals	-5.2	2.9	
Total	Count	591	1853	2444
	Expected Count	591.0	1853.0	2444.0
	% within Hours	24.2%	75.8%	100.0%
	% within Graduation	100.0%	100.0%	100.0%
	% of Total	24.2%	75.8%	100.0%

Pearson Chi-Square: X2(1) = 129.373, p < .001.
Cramer's V = .230, $p < .001$

Chapter Summary

This chapter provided the results of the Chi-square analysis in this retrospective study. The researcher tested the association among the dependent variable (graduation) and the independent variable (number of EXL credit hours taken), as well as the other variables of sex and race. The research questions and hypotheses could be answered by performing the Chi-square analysis and all variables were found to be significant. Chapter V will discuss the findings and recommendations for future research.

CHAPTER V.

DISCUSSION

Based upon a prior research study examining students who took EXL courses versus those who did not, (Rost, Swayze & McCormick, 2023) the researchers found the students who took at least 1 course (3 credit hours) in the EXL program were 6.70 times more likely to graduate than students who did not participate. The purpose of this study is to investigate if the *number* of EXL courses completed impacts student graduation, and if so, to what extent. The following research questions were examined in this study.

1. Is there an association between enrollment in multiple EXL designated courses and graduation among college students**?**
2. Is there an association between enrollment in multiple EXL designated courses and graduation among all races of college students?
3. Is there an association between enrollment in multiple EXL designated courses and graduation among male and female college students?

The researcher utilized the Chi-square analysis and the Cramer's V, then calculated the *Odds Ratio* for each variable in order to examine the research questions and hypotheses. From the conclusions referenced in the previous chapter, the findings of the study affirm each of the following hypothesis statements.

The first hypothesis stated that student participation in multiple EXL designated courses is associated with graduation among college students. The results of the contingency table indicated that there was a significant incremental association between students enrolled in multiple levels of EXL courses and their likelihood of graduation.

Although students who took any level of EXL courses showed an overwhelmingly positive association with graduation as opposed to students who did not complete any EXL courses, this present study reveals the substantial incremental benefits of multiple EXL courses. Therefore, students who participate in EXL courses are significantly associated with a higher graduation rate than those who do not, and as the number of EXL courses taken increases, the higher the likelihood of graduation increases respectively.

As the results of the Chi-square analysis and rate ratio indicated, students taking 15+ credit hours of Experiential Learning coursework (approximately 5 or more EXL courses) had a significantly higher graduation likelihood than students taking fewer credit hours of EXL, and the graduation likelihood increases with each additional course taken. Table 2 demonstrates the overall incremental benefits pattern as credit hours increase from each category (or with each additional EXL course taken). As the results in the previous section revealed, of the 506 students who took 15 or more credit hours, 498 graduated leaving only 8 students who did not graduate. This results in a graduation rate of 98.4 percent. In comparison, those taking 3-5 credit hours, had a graduation percentage of 73.6 which is still significantly higher than the graduation percentage of students who did not take any EXL coursework. The incremental improvement in graduation rate is revealed as students who took 6-8 credit hours had a graduation rate of 81.9 percent, students taking 9-11 had a graduation rate of 94.1 percent, and students taking 12-14 hours had a rate of 95.4 as compared to the 98.4 graduation percentage for those taking 15 or more. The *Odds Ratio* also demonstrates this incremental increase. For example, the odds of students who complete 15 or more credit hours of EXL coursework

were 22.31 times more likely to graduate than students completing only 3-5 credit hours; 13.77 times more likely to graduate than students taking 6-8 hours; 3.92 times more likely to graduate than 9-11 hours; and 2.97 times more likely than 12-14 credit hours. Therefore, based upon the data analysis, the investigator was able to answer the first research question and accept the first hypothesis that there is an association between enrollment in multiple EXL designated courses and graduation among college students.

The second hypothesis stated that student participation in multiple EXL designated courses is associated with graduation among all races of college students. As the results of the Chi-square analysis and rate ratio analysis indicated, both the students of color and white students showed a greater incremental likelihood of graduation with multiple EXL credit hours earned. White students followed the same pattern of increased likelihood of graduation with each additional EXL course taken from the 3-5 hour category all the way through the 15+ category. The graduation percentage for white students who took 3-5 credit hours of EXL coursework was 74.0 percent, while white students who took 15+ credit hours had a graduation percentage of 98.8 percent. The *Odds Ratio* showed that white students taking 15+ credit hours were 28.63 times more likely to graduate than white students who took only 3-5 credit hours, with significant incremental gains at each level of credit hours taken.

Students of color also showed a similar pattern; however, there was a slight anomaly between the 9-11 and 12-14 credit hour mark. Unlike their white counterparts, the students of color appeared to have hit a statistical threshold which corrects itself at the 15+ hour mark. The students of color again showed considerable gains at the 15+ credit hour mark. For example, students of color who took 15+ EXL credit hours had a

graduation percentage of 96.8 as opposed to 72.5 percent for the students of color who took 3-5 EXL credit hours. The *Odds Ratio* for students of color who took 15+ hours of EXL coursework were 11.41 times more likely to graduate than the students who took only 3-5 hours. In keeping with that pattern, the *Odds Ratio* for students of color who took 15+ hours of EXL coursework were 6.71 times more likely to graduate than the students who took 6-8 hours. However, students of color who took 15+ hours were only 0.72 times more likely to graduate than students of color who took 9-11, yet 1.70 times more likely to graduate than students of color who took 12-14 hours. It is worth noting that in each category the students of color graduated within one to two percentage points of their white counterparts, except for the 9-11 credit hour category where students of color graduated 4.3 percentage points *higher* than white students. At the 9-11 credit hour mark, students of color graduated at 97.6 percent vs. white students who graduated at 93.3 percent. It is also important to note that Finley and McNair (2013) had a similar finding with the leveling off among African American and Hispanic students after 3-4 high impact practices; although, Finley and McNair did not find the significant improvement after the fifth high impact practice as this current study does. Through the data analysis, the investigator is able to answer the second research question and accept the second hypothesis that participation in multiple EXL designated courses is associated with graduation among students of all races/ethnicities. Although students of color did not show an increase in graduation percentage at the 12-14 hour mark, students of color did rebound at the 15+ mark. Therefore, the Chi-square demonstrated a significant association, but per the *Odds Ratios* the effects were not symmetrically cumulative for students of color.

The third hypothesis stated that student participation in multiple EXL designated courses is associated with graduation among male and female college students. As the results of the Chi-square analysis and rate ratio analysis indicated, both male and female students showed a greater likelihood of graduation with multiple EXL credit hours earned. Female students followed the same pattern of increased likelihood of graduation with each additional EXL course taken from the 3-5 hour category through the 15+ category. Female students taking 15 or more credit hours had a graduation rate of 98.2 percent as compared to 77.9 for female students who completed 3-5 hours of EXL credit. The *Odds Ratio* showed that females taking 15+ credit hours were 15.38 times more likely to graduate than females who took only 3-5 credit hours with significant incremental benefits at each level of credit hours taken.

Male students also showed a similar pattern; however as with students of color, there was a slight anomaly with the male students between the 9-11 and 12-14 credit hour mark. Although, the Chi-square demonstrated a significant association, the *Odds Ratios*' effects were not symmetrically cumulative for male students. Unlike their female counterparts, the male students appeared to have hit a statistical threshold at the 12-14 mark where a subpopulation of male students show a leveling off. This anomaly might possibly be explained by potential work load increases in upper division courses or time management constraints. Although males showed this anomaly between the 9-11 credit hours and 12-14 hours, this regression naturally corrects with the male students showing phenomenal gains at the 15+ credit hour mark as we see the graduation rates fall back in line with the statistical trajectory and expectations. Male students lagged behind female students at the 3-5 credit hour mark by nearly 9 percentage points and yet had very

similar graduation percentages as the female students at the 6-8, 9-11, and 12-14 credit hour categories. Ironically, however, the male students actually graduated at a slightly *higher* rate than female students at the 15+ credit hour mark. The male students' graduation percentage for 15+ credit hours was 99.2 percent as opposed to females at 98.2 percent. An even more powerful picture emerges when you look at the *Odds Ratios*. The *Odds Ratio* for males who took 15+ hours of EXL coursework showed they were 53.60 times more likely to graduate than the male students who took only 3-5 hours. In keeping with that pattern, the *Odds Ratio* for males who took 15+ hours of EXL coursework were 28.20 times more likely to graduate than the male students who took 6-8 hours.

Therefore, based upon the data analysis, the investigator is able to answer the third research question and accept the third hypothesis that participation in multiple EXL designated courses is associated with graduation among male and female college students. Students who completed 15+ hours in both groups had a significantly higher graduation percentage and likelihood of graduation. Although we know there will be a point of diminishing returns, the results of the 15+ hours show that we have not yet reached the point of diminishing returns for the overall population.

Conclusions and Recommendations

Based upon the growing emphasis on graduation as the major indicator of student success, the purpose of this study was to determine if the likelihood of graduation increases with each additional EXL course completed. As mentioned in the review of the literature, participation in experiential learning is credited with positive student experiences related to their learning and ultimately higher graduation numbers, as well as

higher levels of career readiness and employment outcomes. Further, affirming the prior literature, the baseline study of Rost, Swayze, and McCormick (2023) found that students who participated in EXL taking at least 3 credit hours (one course) had a graduation percentage of 80.6 in comparison to those who do not participate with a 38.6 percentage. The *Odds Ratio* revealed that students who participated in at least one EXL course were 6.70 times more likely to graduate than those who did not.

It would appear; therefore, with the value of higher education in question and the need to show improved graduation rates, finding ways to increase the number of students participating in EXL could be one way to contribute significantly to student success. Kuh, Gambino, Ludvik, and O'Donnell (2018, p.5) refer to a 2017 report of the Academy of Arts and Sciences' Commission on the Future of Undergraduate Education which emphasizes that the nation's top priority in higher education must be to strengthen the educational experience of students. The authors quote the report as follows:

> What was once a challenge of quantity in American undergraduate education, of enrolling as many students as possible, is increasingly a challenge of educational quality—of making sure that all students receive the education they need to succeed, that they are able to complete the studies they begin, and that they can do all of this affordably, without mortgaging the very future they seek to improve (p. 1).

In addition to helping students make academic connections between course content and their hands-on experiences, the authors contend that participation in experiential learning helps students to develop both personally and professionally with benefits such as "the development of conscientiousness, academic self-efficacy, growth

mindset, and a sense of belonging (p. 23). Other important benefits include dispositional attribute growth such as "openness, curiosity, and a readiness to reconsider long-held ideas about oneself and the world" (p. 24). Further outcomes include emotional regulation, persistence, planning, problem solving, and a positive sense of future self (p.15). Experiential learning therefore helps students integrate their learning experiences within a course, across courses and programs, within their personal and professional lives, and within the global context. Another positive outcome of experiential learning is that the development of a growth mindset leads to lifelong learning. Kolb (1984) stated, "Ideas are not fixed and immutable elements of thought but are formed and reformed through experience" (p.26). As students learn the value of reflection and continue to repeat the steps of the Experiential Learning Cycle, they are able to apply those practices to every aspect of their lives. In the article, Reconceptualizing Kolb's Learning Cycle as Episodic & Lifelong (2023), the authors advocate for researching both the immediate outcomes from experiential learning, as well as the lifelong learning benefits. They point out that "as individuals continue to grow over time, their development will be reminiscent of the growth rings inside a tree. The larger the tree becomes, the more rings there are, and thus, an observable growth will have occurred" (p. 29). Their goal then is to "present a longer-term perspective that recognizes what learners are already bringing with them into the learning environment as well as the continual learning cycles that occur in lifelong learning" (p. 30).

Stock and Kolb (2021) state, "…learners receive information through experiencing and transform it by reflecting and thinking and then transform it again by acting to change the world. They are both receivers and creators of knowledge" (p. 5).

Horne (2021) confirms the power of experiential learning through the continuous reflection process. She states that students who are encouraged to think experientially and experimentally and take informed risks show higher levels of student retention and higher GPAs. In addition she relates that students "cultivated a number of transferrable skills, critical not only for the successful completion of an academic degree but corresponding to the most sought-after employment skills…creativity, critical thinking, coordinating with others, emotional intelligence, cognitive flexibility, ... mindfulness, inclusivity, and … an increased level of cross-cultural awareness, competency and dialogue (p. 22-23). One final benefit was that "students who had previously felt disengaged from an active learning process or had not fully experienced belonging or personal agency within the post-secondary environment boosted their confidence and ability to learn and showcase their knowledge" (p.23) Kuh, Gambino, Ludvik, and O'Donnell (2018) affirm the value of these skills:

> Most informed observers generally agree that in addition to up-to-date technical knowledge, virtually every field of endeavor in the future will seek college graduates who are proficient in a range of competencies, some of which are time-honored expected outcomes of college such as critical thinking, analytical reasoning, clarity of thought and expression. Other attributes have more recently ascended in importance including curiosity; self-regulation; conscientiousness; flexibility; and the ability to work effectively with people from diverse backgrounds, especially those who hold varying perspectives on how to identify and devise solutions to messy, unscripted problems. (pp. 5-6).

Roberts (2015) asks what is it about experiential learning practices that make them so engaging and effective, and then answers with Kuh's findings that these activities tend to be immersive, involves close faculty and student interaction, peer-to-peer collaboration and relationship building. Experiential learning takes students out of their comfort zones placing them into diverse and unfamiliar situations where they must navigate the unknown. Roberts advocates:

> "True experiential education provides teachers and students with opportunities to frame the content within a relevant and applicable context. That is not to say that is always easy to create or find those opportunities, but there is no discipline or topic or content that is out of reach. As students, parents, policy makers, and politicians (aka the funders of most higher education) become increasingly more astute and discerning about the value of a college degree, it is incumbent on us to invoke the experiential models whose origins stem back to the ancient Greeks and re-establish the relevance of what we are doing" (pp. xv-xvi).

Gray (2022) advises that this admonition is supported by the National Association of Colleges and Employers. NACE's Job Outlook 2023 report states, "Career service practitioners can help college students attract the attention of employers … by encouraging them to highlight the skills they developed—such as problem-solving and teamwork skills—through their various experiences." Other characteristics that employers are looking for include strong work ethic, analytical/quantitative skills, written communication skills, and technical skills. Gray advises,

> As employers are looking for competency and skills, candidates who can demonstrate experience, knowledge, and ability through their resume and applications will have the competitive edge. Beyond that, and what can really make them stand out from other candidates, is the ability to connect these skills and qualities they develop to the position and articulate that connection to prospective employers.

Gray also emphasizes that employers, therefore, place an extremely high value on internship experience.

Finley and McNair (2013) in the AAC&U article entitled, Assessing Underserved Students' Engagement in High-Impact Practices, found that "the effects of engagement in multiple high-impact practices, both across and within different groups of students, provide strong evidence for the need to ensure that all students encounter several high-impact experiences during college" (p.13). The authors continue by stating, "Our analysis suggests that curricula developed with an eye toward pervasiveness of high-impact practices across years are likely to provide a positive and discernible 'boost' to students' perceptions of their learning, regardless of their background" (p. 13). Furthermore they add, "Like first-generation and transfer students, students in underrepresented racial or ethnic minority groups also benefitted significantly from engagement in multiple-high-impact practices" (p.12). Vaz (2019) advocates, "At a time when the value of higher education is increasingly questioned, it's essential for colleges and universities to prepare students for successful and satisfying lives." He adds that the abilities students gain from experiential learning "can position students for a solid, certain

future and provide a blueprint for higher education institutions to make their value to society more evident."

Limitations

While the findings from this study were significant, they cannot prove causation and should, therefore, be viewed cautiously. Even though the study included an extensive dataset over a number of years, this data represents only one large public university located in the Southeastern United States. In addition, the variables of the study were limited to EXL credit hour enrollment, graduation, sex and race, and as such, can only offer a limited view related to the results of student graduation outcomes. Although every effort was taken to eliminate extraneous variables from this study in order to gain a clear understanding of the actual effects of the Experiential Learning Scholars (EXL) Program, we cannot eliminate the possibility that other factors may have influenced the results.

Future Research Applications

Future research focusing on EXL student graduation rates could be built upon the foundation of this study, as well as the former baseline study by Rost, Swayze, & McCormick (2023). These recommendations include investigating the duration and level of intensity of experiential learning in each course, using a qualitative study to try to determine why males and students of color seem to experience an anomaly at the 12-14 hour mark, determining when students took the EXL designated courses during their time working on their degree and if/how that impacts the statistics, determining if there is an inequity between underserved students and traditionally served students' rate of

enrollment in EXL courses, and finally including a larger study with a more diverse population.

The first recommendation for future study is to investigate the duration and intensity of the experiential learning project(s) in each course. For example, does a course which has a semester-long project have more or less of an association to student success than a course with multiple smaller projects throughout the semester. Another point to investigate could be the association of a course consisting of one short-term project as compared to a course with a semester-long project, or the comparison of a single semester course as compared to sequential scaffolded experiential learning courses. In addition, it would be valuable to determine at what point does the law of diminishing returns start.

The second recommendation for further research is to investigate the underlying reasons for students of color and male students in these cohort groups to have a slightly more significant graduation percentage at the 9-11 hour mark than at the 12-14 category, and yet they rebound and have significantly greater graduation results at the 15+ credit hour mark. Research should determine if this phenomenon could be due to the fact that the students are getting into more difficult content areas by the fourth EXL course (or 12-14 credit hours), yet for the students who persevere and take 5 EXL courses or (15+ credit hours), the graduation percentage soars. Other considerations could be whether it is related to certain majors or if students changed majors at this point, if factors such as time management or workload, or whether or not family circumstances may have been the cause. Those factors could be further investigated through a qualitative study with interviews and focus groups.

It is important to note that in a study by AAC&U of self-reported gains, (Finley & McNair, 2013) had similar findings. For example their study found that "African American, Hispanic, and white students all demonstrated higher levels of engagement in deep learning approaches after participating in greater numbers of high-impact practices" (pp. 15-16). Interestingly, Asian American students' perceptions of their learning after multiple experiences was significantly higher than other racial or ethic groups. However, African American and Hispanic students increased with multiple experiences up to four practices and then leveled off or declined slightly at more than four experiences, while white and Asian Americans showed an increased progression with each additional experience. Their study did not look at differences in sex/gender of the students.

The third further research recommendation is to examine when students took the EXL designated courses during their time working on their degree and if/how that might impact the statistics. For example, do students who take one or more EXL course each year or each semester benefit greater than those who take several EXL courses during one or more semesters, or does taking EXL courses earlier vs. later in their educational pursuits have any impact on graduation rates.

The fourth recommendation is to determine what factors impact participation among the traditionally underserved population. Although all the students in an EXL course receive the hands-on learning benefits, further research could determine if there is an inequity in the level of participation among the traditionally underserved students, and if so, search for ways to make EXL participation easier. For example, are students of color or first generation students enrolling in EXL courses at the same rate as the rest of the student population? Are majors, minors, and concentrations an important factor in

EXL course participation? Do peer relationships affect EXL course enrollment, etc.? Does the age of the student matter? Do international students prefer EXL courses? Does online vs. hybrid vs. traditional delivery platform make a difference? Najmabadi (2017) of Cal State Fullerton advises, "Resource-strapped institutions may find that the most effective way to deliver the benefits of experiential learning is to embed them into the everyday college experience"

The final suggestion for future research is to conduct a larger study with a broader and more diverse sample size which would give greater insights into the research questions. For example, expanding the study to all the four-year public universities across the state of Tennessee would give a much more vivid picture. Possibly in the future the study could be scaled to a regional or national investigation in order to make it even more generalizable.

Chapter Summary

Although the EXL Scholars Program has shown consistent, substantial growth and the researcher has more than 17 years of quantitative and qualitative evidence indicating that experiential learning (EXL) is making a significant positive impact on student success, further empirical evidence was sought in order to improve decision making and expand opportunities. The purpose of this study was to determine if, and to what extent, this quantitative study supported these other overwhelmingly positive research outcomes.

The results of this quantitative study do support the hypothesis that the more EXL courses a student takes, the higher the likelihood of graduation. By weaving multiple high impact practices (HIPs) throughout the EXL courses, it appears that the EXL Scholars

Program offers a valuable path toward persistence and graduation. Therefore, based upon these findings, we can assert that increased support of experiential learning (EXL) courses on this campus will likely lead to higher levels of student success at this particular institution. This, in turn, should effectively translate into a greater ROI for the institution's stakeholders.

References

American Academy of Arts and Sciences Commission on the Future of Undergraduate Education (2017). *The future of undergraduate education, the future of America*. American Academy of Arts and Sciences.

American Association of Colleges and Universities. (2023). *Essential learning outcomes*. https://www.aacu.org/trending-topics/essential-learning-outcomes

Association for Experiential Education. (n.d.). *Our mission and values.* https://www.aee.org/mission-and-values

Association for Experiential Education. (n.d.). *What is experiential education?* https://www.aee.org/what-is-experiential-education

American Association of Colleges and Universities. (2023). *Valid assessment of learning in undergraduate education (VALUE)*. https://www.aacu.org/initiatives-2/value

Apple. (2023). *150 best Chinese quotes and sayings about love/life*. Chinese Travel. https://www.chinatravel.com/culture/chinese-proverbs#learning.

Baker, M. A., & Robinson, J. S. (2019). The interaction of learning style on measures of successful intelligence in secondary agriculture students exposed to experiential and direct instruction. *Journal of Agricultural Education, 60*(3), 14–31. https://doi.org/10.5032/jae.2019.03014

Beltran, R. S., Marnocha, E., Race, A., Croll, D. A., Dayton, G. H., & Zavaleta, E. S. (2020). Field courses narrow demographic achievement gaps in ecology and evolutionary biology. *Ecology & Evolution (20457758), 10*(12), 5184–5196. https://doi.org/10.1002/ece3.6300

Bornais, J. A. K., Andrews, D. M., Cassidy, A. L. E. V., Wright, W. A., & Monette, M.-J. (2019). A decade of outdoors experiential workshops: Facilitator reflections and tips. *Collected Essays on Learning and Teaching*, *12*, 107–118.

Borton, T. (1970). *Reach, touch and teach: Student concerns and process education*. Mcgraw-Hill.

Boyer, E. (1990). Service: Linking school to life. In J. C. Kendall & Others (Eds.), *Combining service and learning: A resource book for community and public service* (Vol. 1). National Society for Internships and Experiential Education.

Boyle, M., Gotcher, D. & Otts, D. (2018). One state's use of prior learning assessment to augment its workforce development agenda. *Journal of Continuing Higher Education*, 66(1), 54-58.

Bradberry, L. A., & De Maio, J. (2019). Learning by doing: The long-term impact of experiential learning programs on student success. *Journal of Political Science Education*, *15*(1), 94–111. https://doi.org/10.1080/15512169.2018.1485571

Bursztyn, N., Walker, A., Shelton, B., & Pederson, J. (2017). Assessment of student learning using augmented reality Grand Canyon field trips for mobile smart devices. *Geosphere*, *13*(2), 260–268. https://doi.org/10.1130/GES01404.1

Butcher, G. & Patton, J. (2024). What would Boyer do? *About Campus,* May-June, 2-7.

Butrymowicz, S., & Klodner, M. (2019). Will colleges with sky-high default rates face consequences? *The Hechinger Report*. https://hechingerreport.org/will-colleges-with-sky-high-default-rates-face-consequences/

Cantor, J. (1995). Experiential learning in higher education: Linking classroom and community, *ASHE-ERIC Higher Education Report,* 7.

Carey, K. (2022). The incredible shrinking future of college. *Vox*. https://www.vox.com/the-highlight/23428166/college-enrollment-population-education-crash

Carrasco, M. (2022). New bill would make institutions repay some of defaulted students' loan debt. National Association of Student Financial Aid Administrators. https://www.nasfaa.org/news-item/27869/New_Bill_Would_Make_Institutions_Repay_Some_of_Defaulted_Students_Loan_Debt

Coker, J. S., & Porter, D. J. (2015). Maximizing experiential learning for student success. *Change: The Magazine of Higher Learning*, *47*(1), 66–72.

Complete College America. (n.d.). *Linkedin*. https://www.linkedin.com/company/complete-college-america,

Complete College America. (2023). https://completecollege.org/strategies/

Complete College America. (2022). *No middle ground: Advancing equity through practice*. https://eric.ed.gov/?id=ED626345.

Davis, A., Lohmeyer, A. K., & Shonhiwa, T. (2019). Peer-to-peer training for student empowerment in service learning. *Business Education Innovation Journal*, *11*(2), 175–180.

Deeken, L., Vecchione, A., Carr, A., Hallman, S., Herzellah, L., Lopez, N., Rucker, R., Alfieri, M., Tenofsky, D., Moore, A., Fawley, N., Glover, J., Peacemaker, Pajewski, A. (2019). Charting a path forward in student success. *Reference Services Review*, *47*(4), 503–526. https://doi.org/10.1108/RSR-08-2019-0048

Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process*. D. C. Health.

Dewey, J. (1938). *Experience and education*. Macmillan Company.

Dewey, J. (1944). *Democracy and education.* Free Press.

Dewey, J. (1997). *How we think.* Dover (Original 1933).

Doye, C. (2012). *Reflection and reflective writing*. Institute for Academic Development. University of Edinburgh. https://slideplayer.com/slide/1381928

Drive to 55 Alliance (2023). https://driveto55.org/

Dunagan, A. (2017). *College transformed: Five institutions leading the charge in innovation.* Clayton Christensen Institute for Disruptive Innovation.

Driscoll, J. (1994). Reflective practice for practice. *Senior Nurse*, 13 (Jan/Feb), 47-50.

Driscoll, J. (2006). Practising clinical supervision: A reflective approach for healthcare professionals. 2nd ed. London: Elsevier Health Services.

Driscoll, J. (2017). *Practising clinical supervision: A reflective approach for healthcare professionals* (2nd ed.). Baillière Tindall Elsevier.

Eaker, R., & Sells, D. (2016). *A new way: Introducing higher education to professional learning communities at work.* Solution Tree.

Edmondson, D. & Matthews, L. (2019). *An innovative approach to marketing curriculum that prepares students for the workforce.* Atlantic Marketing Association Proceedings. https://digitalcommons.kennesaw.edu/ama_proceedings/2019/ED-EL_T07/1/

Egan, J., Tolman, S., McBrayer, J. S., & Ballesteros, E. (2023). Reconceptualizing Kolb's learning cycle as episodic and lifelong. *Experiential Learning and*

Teaching in Higher Education, *6*(1), 24-33. https://doi.org/10.46787/elthe.v6i1.3607

Ely, A. V. (2018). Experiential learning in "innovation for sustainability." *International Journal of Sustainability in Higher Education*, *19*(7), 1204–1219. https://doi.org/10.1108/IJSHE-08-2017-0141

Eyler, J. (2009). The power of experiential education. *Liberal Education*, *95*(4), 24. https://www.aacu.org/publications-research/periodicals/power-experiential-education

Ezezika, O. (2019). Reflections on experiential learning in an undergraduate global health course: Bringing the workplace into the classroom. *Collected Essays on Learning and Teaching*, *12*, 71–78.

Fasules, M. & Campbell, K. (2020). *The competencies students need for workforce success*. American Association of Colleges and Universities. https://www.aacu.org/liberaleducation/articles/the-competencies-students-need-for-workforce-success

Field, A. P. (2018). *Discovering statistics using IBM SPSS statistics* (5th ed.). Sage.

Fink, L. D. (2013). *Creating significant learning experiences: An integrated approach to designing college courses*. Jossey-Bass.

Fitzgerald, H. E., Bruns, K., Sonka, S. T., Furco, A., & Swanson, L. (2016). The centrality of engagement in higher education: Reflections and future directions. *Journal of Higher Education Outreach and Engagement*, *20*(1), 245–253.

Gates Foundation. (2023). *Post-secondary success*. https://www.gatesfoundation.org/our-work/programs/us-program/postsecondary-success

Georgetown University. (2019). *High default rates among students who drop out further fueling completion efforts*. https://feed.georgetown.edu/access-affordability/high-default-rates-among-students-who-drop-out-further-fueling-completion-efforts/

Goldman, M. (2021). *High impact educational practices: What they are and how to promote them*. NACADA Academic Advising Today. https://nacada.ksu.edu/Resources/Academic-Advising-Today/View-Articles/High-Impact-Educational-Practices-What-They-Are-and-How-to-Promote-Them.aspx

Goodreads. (n.d.). *Quote by Confucius*. https://www.goodreads.com/quotes/661227-tell-me-and-i-will-forget-show-me-and-i

Goodreads. (n.d.). *Author quotes John Dewey*. https://www.goodreads.com/author/quotes/42738.John_Dewey

Gray, K. (2022). *As their focus on GPA fades, employers seek key skills on college grads' resumes*. National Association of Colleges and Employers. https://www.naceweb.org/talent-acquisition/candidate-selection/as-their-focus-on-gpa-fades-employers-seek-key-skills-on-college-grads-resumes

Hammond, A., & Albert, C. D. (2020). Learning by experiencing: Improving student learning through a model United Nations simulation. *Journal of Political Science Education*, *16*(4), 441–458. https://doi.org/10.1080/15512169.2018.1548967

Hanson, Melanie. (2023). *Student loan debt statistics*. Educational Data. https://educationdata.org/student-loan-debt-statistics

Hesser, G. (2014). *Strengthening experiential education: A new era*. National Society for Experiential Education.

Hoanca, B., & Craig, B. (2019). Building a K-16-industry partnership to train IT professionals. *Journal of Information Systems Education*, *30*(4), 232–241.

Hollis, F. H., & Eren, F. (2016). Implementation of real-world experiential learning in a food science course using a food industry-integrated approach. *Journal of Food Science Education, 15*(4), 109–119. https://doi.org/10.1111/1541-4329.12092

Huang, X., Myles, C., Palomba, K., Rahim, D., & Raymond, V. (2018). *Are you experienced? An assessment of experiential learning in New Jersey: A report to the New Jersey office of the Secretary of Higher Education*. Rutgers. https://bloustein.rutgers.edu/wp-content/uploads/2018/07/2018-OSHE.pdf

Irvine, F., Gracey, C., Jones, O. S., Roberts, J. L., Tamsons, R. E., & Tranter, S. (2008). Research awareness: Making learning relevant for pre-registration nursing students. *Nurse Education in Practice, 8*(4), 267–275. https://doi.org/10.1016/j.nepr.2007.09.006

Jacoby, B. and Associates (1996). *Service-Learning in higher education: Concepts and practices*. Jossey-Bass.

Johnson, T., Vera, T. D., Irvin, V., & Elliott, K. (2019). Engaging college students in experiential learning opportunities within extension. *Journal of Extension*, *57*(2).

Jones, L. (2022). *Federal student loan delinquency and default: What to know*. U.S. News & World Report. https://www.usnews.com/education/articles/federal-student-loan-delinquency-and-default-what-to-know

Katula, R. & Threnhauser, E. (1999). Experiential education in the undergraduate curriculum. *Communication Education*, 48 (July), 238.

Kendall, J., Duley, J., Little, T., Permaul, J., and Rubin, S. (1986). S*trengthening experiential education within your institution*. National Society for Internships and Experiential Education.

Kinzie, J. (2012). *Fostering student learning and success: Bridging the gap: Teaching underprepared students*. Indiana University Center for Postsecondary Research. https://www.pfw.edu/dotAsset/8e6a9343-4a30-4c6a-990e-75c7e44d65ca.pdf

Kinzie, J., McCormick, A. C., Gonyea, R. M., Dugan, B., & Silberstein, S. (2020). *Assessing quality and equity in high-impact practices: Comprehensive report*. Indiana University Center for Postsecondary Research. https://nsse.indiana.edu/research/special-projects/hip-quality/index.html, p. 20.

Kolb, D. A. (1984). *Experiential learning: Experience as a source of learning and development*. Prentice-Hall.

Kolb, A. Y., & Kolb, D. A. (2005). Learning styles and learning spaces: Enhancing experiential learning in higher education. *Academy of Management Learning & Education*, 4(2), 193 – 212. https://doi.org/10.5465/AMLE.2005.17268566.

Kuh, George D. (2008). *High-impact educational practices: What they are, who has access to them, and why they matter.* Association of American Colleges and Universities. https://www.aacu.org/publication/high-impact-educational-practices-what-they-are-who-has-access-to-them-and-why-they-matter

Kuh, George D. & O'Donnell, K. (2013). E*nsuring quality & taking high-impact practices to scale*. Association of American Colleges & Universities.

Kuh, G. (2017). *Key features of high-impact practices*. Center for Engaged Learning - Elon University. https://www.youtube.com/watch?v=4i9xHt5erAc

Kuh, G. D., Gambino, L. M., Bresciani Ludvik, M., & O'Donnell, K. (2018). *Using ePortfolio to document and deepen the impact of HIPs on learning dispositions*. National Institute for Learning Outcomes Assessment (NILOA). http://learningoutcomesassessment. org/occasionalpaperthirtytwo.html

Kurt, S. (2021). *Constructivist learning theory*. Educational Technology. https://educationaltechnology.net/constructivist-learning-theory/

Kurt, S. (2022). *Kolb's experiential learning theory & learning styles*. Educational Technology. https://educationaltechnology.net/kolbs-experiential-learning-theory-learning-styles/

Lee, S. A. (2007). Increasing student learning: A comparison of student's perceptions of learning in the classroom environment and their industry-based experiential learning assignments. *Journal of Teaching in Travel and Tourism*, 7(4), 37-54. https://doi.org/10.1080/15313220802033310

Leming, H., Gorbunov, A., & Tingle, C. (2023). *Service learning and student outcomes in Tennessee community colleges: Multi-cohort causal analysis*. Tennessee Board of Regents. https://www.tbr.edu/sites/default/files/media/2023/04/Service-learning-%26-student-outcomes-in-TN-community-colleges_Multicohort-causal-analysis_2.pdf

Lewandowski, A. M., Depalma, D. G., Englund, R. S., & Cartwright, M. M. (2017). Operationalizing the roles of experiential learning: Bringing the partnership to life. *Experiential Learning & Teaching in Higher Education (ELTHE): A Journal for Engaged Educators*, *1*(2), 7–24.

Long, N. (2024). *The journey toward value and collaboration in Higher Education*. EvoLLLution. https://evolllution.com/journey-toward-value-and-collaboration-in-higher-education?utm_campaign=Evo%20%7C%20Association%20Partnerships&utm_medium=email&_hsmi=293253353&_hsenc=p2ANqtz--4hB_z1ULZaztWUAsKMtMFJYif8aAelYk41JKdMUm71-nLY0PTKasNNES6fqnAuggxjCe7VaDoti1tfw3ZV5g36Uesdw&utm_content=293131862&utm_source=hs_email

Lumina Foundation. (2023). *Homepage*. https://www.luminafoundation.org/about/

McHugh, M. (2013). The Chi-square test of independence. *Biochemia Medica*, 23(2), 143-149. http://doi.org/10.11613/BM.2013.018

Mellow, G. O. (2015). Cultivating a community of excellence. *Journal of the National Collegiate Honors Council*, *16*(2), 65–69.

Middle Tennessee State University. (2023). Board of Trustees Dashboard. www.mtsu.edu/boardoftrustees/dashboard/

Middle Tennessee State University. (2006). Experiential learning quality enhancement plan. https://w1.mtsu.edu/QEP/

Middle Tennessee State University. (2022-23). *Undergraduate catalog: Undergraduate degree requirements*. http://catalog.mtsu.edu/content.php?catoid=36&navoid=8545

Middle Tennessee State University. (2023). Experiential learning scholars program institutional data.

Middle Tennessee State University. (2023). *Office of Student Success: Mission statement*. https://www.mtsu.edu/studentsuccess/mission.php.

Millea, M., Wills, R., Elder, A., & Molina, D. (2018). What matters in college student success? Determinants of college retention and graduation rates. *Education, 138*(4), 309–322.

Misyak, S., Culhane, J., McConnell, K., & Serrano, E. (2016). Assessment for learning: Integration of assessment in a nutrition course with a service-learning component. *NACTA Journal, 60*(4), 358–363.

Najmabadi, S. (2017). *How colleges can open powerful educational experiences to everyone*. The Chronicle of Higher Education. https://www.chronicle.com/article/how-colleges-can-open-powerful-educational-experiences-to-everyone.

National Association of Colleges and Employers. (n.d.) *NACE Trending data.* https://www.naceweb.org/

National Association of Colleges and Employers. (n.d.). *Understanding cooperative education*. https://www.naceweb.org/career-development/internships/understanding-cooperative-education/

National Association of Colleges and Employers. (2020). *Career readiness competencies*. https://www.naceweb.org/uploadedfiles/files/2021/resources/nace-career-readiness-competencies-revised-apr-2021.pdf

National Association of Colleges and Employers. (2020). *Career readiness defined*. https://www.naceweb.org/career-readiness/competencies/career-readiness-defined/

National Society for Experiential Education. (2013). *NSEE position statement*. http://www.nsee.org/8-principles

National Society for Experiential Education. (2023). *NSEE heritage talks*. https://www.nsee.org/nsee-heritage-talks

National Society for Experiential Education. (2023). *NSEE Guiding principles of ethical practice*. http://www.nsee.org/guiding-principles

National Society for Experiential Education. (2014). *Vision, mission, and goals*. https://www.nsee.org/vision-mission-and-goals

Nielsen, D., Ballantyne, E., Murad, F., and Fournier, M. (2022). *Getting ready for work-integrated learning*. BCcampus. https://opentextbc.ca/workintegratedlearning/

Patka, M., Rieko Miyakuni, & Robbins, C. (2017). Experiential learning: teaching research methods with PhotoVoice. *Journal of Counselor Preparation & Supervision*, *9*(2), 264–284. https://doi.org/10.7729/92.1183

Pennings, M., Cushing, D. F., Gomez, R., Dyson, C., & Coombs, C. (2019). Gaining "raw insider knowledge": The benefits and challenges of international study tours for creative industries students. *International Journal of Art & Design Education*, *38*(2), 539–554. https://doi.org/10.1111/jade.12219

Rayburn, S. W., Anderson, S. T., & Smith, K. H. (2018). Designing marketing courses based on self-determination theory: Promoting psychological need fulfillment and improving student outcomes. *Journal for Advancement of Marketing Education*, *26*(2), 22–32.

Rivers, M. L., Dunlosky, J., & Persky, A. M. (2020). Measuring metacognitive knowledge, monitoring, and control in the pharmacy classroom and experiential

settings. *American Journal of Pharmaceutical Education, 84*(5), 549–560. https://doi.org/10.5688/ajpe7730

Roberts, J. W. (2015). Experiential education in the college context: What it is, how it works, and why it matters (1st ed.). Routledge. https://doi.org/10.4324/9781315774992

Rost, J. (2016). Student access to academic support services as a mediating variable for increased academic performance and graduation rates among traditional undergraduate students: A survival analysis. *Dissertation Abstracts International Section A: Humanities and Social Sciences*, 77(1-A), E.

Rost, J. (2023). *ALSI 7620: Advanced quantitative research methods. Unit 7 lecture: Categorical outcomes: Chi-square*. Middle Tennessee State University.

Rost, J., Swayze, A. & McCormick, J. (2023). Increased graduation rates in students who take one or more experiential learning classes during their undergraduate program of study. *Experiential Learning & Teaching in Higher Education (ELTHE)*, 6(2), 30-49.

Rutter, M. P., & Mintz, S. (2019). *The 8 steps institutions need to take to improve student success*. Inside Higher Ed. https://www.insidehighered.com/blogs/higher-ed-gamma/8-steps-institutions-need-take-improve-student-success

Sangpikul, A. (2020). Challenging graduate students through experiential learning projects: the case of a marketing course in Thailand. *Journal of Teaching in Travel & Tourism*, *20*(1), 59–73. https://doi.org/10.1080/15313220.2019.1623150

Skaggs, S. L., & Graybeal, L. (2018). Student and police partnerships: Cultivating student success and community development. *Journal of Criminal Justice Education*, *29*(4), 487–506. https://doi.org/10.1080/10511253.2017.1419271

Smith, C. M., & Gibbs, S. C. (2020). Stock market trading simulations: Assessing the impact on student learning. *Journal of Education for Business*, *95*(4), 234–241. https://doi.org/10.1080/08832323.2019.1643279

Steffes, J. (2004). Creating powerful learning environments beyond the classroom. *Change*, 36(3), 46-50.

Strickland, H. P., & Kaylor, S. K. (2016). Bringing your A-game: Educational gaming for student success. *Nurse Education Today*, *40*, 101–103. https://doi.org/10.1016/j.nedt.2016.02.014

Stock, K. L. & Kolb, D. (2021) The experiencing scale: An experiential learning gauge of engagement in learning. *Experiential Learning & Teaching in Higher Education*, 4(1), 6. https://nsuworks.nova.edu/elthe/vol4/iss1/6

Tagg, J. (2004). Alignment for learning: Reorganizing classrooms and Campuses. *About Campus*, 36(3), 46-50.

Takyi-Laryea, A., Levine, I., & Oliff, P. (2022). *Government hits reset on student loan defaults, but many could experience default again*. Pew Trusts. https://www.pewtrusts.org/en/research-and-analysis/articles/2022/06/14/government-hits-reset-on-student-loan-defaults-but-many-could-experience-default-again

Tennessee Board of Regents. (2021). The effect of service learning participation on college outcomes: An empirical investigation.

https://www.tbr.edu/sites/default/files/media/2021/12/ServiceLearningParticipation.pdf

Tennessee Board of Regents. (2021). Student engagement and college outcomes: Analysis of CCSSE data on Tennessee community college students. https://www.tbr.edu/sites/default/files/media/2021/03/StudentEngagementCollegeOutcomes.pdf

Tennessee Board of Regents. (2022). The impact of undergraduate research on student outcomes: Examining high impact practices in TBR community colleges. https://www.tbr.edu/sites/default/files/media/2022/02/The-Impact-of-Undergraduate-Research-on-Student-Outcomes.pdf

Tennessee Board of Regents. (2023). *Student success: High impact practices*. https://www.tbr.edu/student-success/high-impact-practices

University of Maryland Eastern Shore. (2023). *Center for Teaching Excellence: High impact practices*. https://wwwcp.umes.edu/teachingexcellence/high-impact-practices/

University of North Texas. (2021). *College of Education Fall 2021 handbook: Professional development*. https://coe.unt.edu/handbook/pds1/appendices/reflection

University of Nottingham UK. (2023). *Critical reflection models*. https://www.nottingham.ac.uk/nmp/sonet/rlos/placs/critical_reflection/models/driscoll.html

University of Texas at Austin. (2023). *Center for Teaching and Learning. Experiential learning*. https://ctl.utexas.edu/instructional-strategies/experiential-learning

Valencia College. (2023). *HIP relationships*. https://valenciacollege.edu/faculty/faculty-incentive-plan/documents/HIP-Relationships.pdf

Vaz, R. (2019). *High-impact practices work.* Inside Higher Ed. https://www.insidehighered.com/views/2019/06/04/why-colleges-should-involve-more-students-high-impact-practices-opinion

Walker, C. (2019). Experiential learning as a strategy for student completion and course success in the community college. *Community College Journal of Research and Practice, 43*(10–11), 803–806. https://doi.org/10.1080/10668926.2019.1600614

Weber, J. K. (2017). They say we suck: The failure of IPEDS graduation rates to fully measure student success. *Dissertation Abstracts International Section A: Humanities and Social Sciences*,79(3–A), E3.

Weller, N. M., & Saam, J. (2019). A case study on experiential learning in a first-year General Education course. *Journal of the Scholarship of Teaching and Learning, 19*(1), 86–95.

Wetzel, M., & Barrow, R. F. (2020). JROTC: Using experiential learning to develop employability skills. *Techniques: Connecting Education & Careers, 95*(1), 12–13.

Woolfolk, A. E. (1993). *Educational psychology*. Allyn and Bacon.