2019

The Supported Brewing Initiative: a pilot supported employment internship program

https://hdl.handle.net/2144/34816

Boston University

BOSTON UNIVERSITY

SARGENT COLLEGE OF HEALTH AND REHABILITATION SCIENCES

Doctoral Project

THE SUPPORTED BREWING INITIATIVE:

A PILOT SUPPORTED EMPLOYMENT INTERNSHIP PROGRAM

by

KEVIN RICHARD MINNER

B.S., College of William and Mary, 2014
M.S.O.T., Boston University, 2017

Submitted in partial fulfillment of the

requirements for the degree of

Doctor of Occupational Therapy

2019

Approved by

Academic Mentor   _____
                      Karen Jacobs, Ed.D., OT, OTR, CPE, FAOTA
                      Clinical Professor of Occupational Therapy

Academic Advisor   _____
                      Karen Jacobs, Ed.D., OT, OTR, CPE, FAOTA
                      Clinical Professor of Occupational Therapy

DEDICATION

For Meghan, Scott, and Kyle for giving me someone to look up to

For Lindsey, who kept me on track

For my Dad, who taught me the value of character

For my Mom, who won't ever let me quit

ACKNOWLEDGMENTS

I would like to thank:

- My entire family for their unwavering support throughout this long, complicated, and fulfilling process

- Karen Jacobs for her enduring patience, guidance, flexibility, and always reliable support

- Becca Fleischer for listening to my weekly rants and commiserating over the last 4 years

- Allison Mula for your amazing edits, quick responses, and the sprint to the finish

- My colleagues and classmates of past and present who have taught me to live, love, and laugh often

THE SUPPORTED BREWING INITIATIVE:

A PILOT SUPPORTED EMPLOYMENT INTERNSHIP PROGRAM

KEVIN RICHARD MINNER

Boston University, Sargent College of Health and Rehabilitation Sciences, 2019

Major Professor: Karen Jacobs, Ed.D., OT, OTR, CPE, FAOTA Clinical Professor of
Occupational Therapy

ABSTRACT

The goal of the Supported Brewing Initiative is to advocate for OT's role in work and supported employment by providing meaningful, occupation-based, and client-centered programs designed around unique and non-traditional environments. With a growing number of young adults and veterans entering college with TBI and planning to enter the workforce as gainful individuals, it is imperative that OTs lead the development and implementation of supported employment programs nationwide. Through implementation and redesign, the program intends to expand OT practice and improve opportunities for gainful employment and successful transitions into the working world for millions of college students with TBI.   In addition to its pilot nature, review and analysis of the program's outcomes will determine its effectiveness as an OT intervention and publish results in order to advance OT practice and rehabilitation science as a whole. In combination with the outlined dissemination plan, the Supported Brewing Initiative has the potential to significantly and positively influence OT practice and the lives of young adults and veterans with TBI.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

AOTA…………………………...……….American Occupational Therapy Association

AOTF…………………………...………...American Occupational Therapy Foundation

BFI……………………………………………………………...Big Five Inventory

BU…………………………………………………………Boston University

CDC…………………………………………………… Center for Disease Control

CPE…………………………………………………..Certified Professional Ergonomist

EdD…………………………………………………...…… Doctorate in Education

FAOTA……………………………...…. Fellow of the Occupational Therapy Association

NIDILRR…..The National Institute on Disability, Independent Living, and Rehabilitation

Research

OT………………………………………………………….. Occupational Therapy

QOL……………………………………………….………………….. Quality of Life

TBI………………………………………………………… Traumatic Brain Injury

WHO………………………………………………….. World Health Organization

CHAPTER ONE - Introduction

According to the 2006 World Health Organization (WHO) document on the international challenges resulting from neurological disorders, "traumatic brain injury is the leading cause of death and disability in children and young adults around the world and is involved in nearly half of all traumatic deaths" (p. 164). In 2013, there were 2.8 million TBI-related emergency department visits, hospitalizations, and deaths in the U.S. (CDC, 2018). Among those, around 329,290 children ages 19 and younger were treated for sports and recreation-related TBIs Between 2001 to 2012, the rate of emergency department visits more than doubled among young adults. A population of individuals who are transitioning into college in large numbers is veterans with TBI and other disabilities. The Defense and Veterans Brain Injury Center (2015) reported that in 2014, 24,833 active service members experienced a TBI. The Defense and Veterans Brain Injury Center also reported that since 2000 a total of 320,344 US military personnel worldwide have had a medical diagnosis of TBI.

Why is this important? Consider the average young adult handling the transition from education to gainful employment. Copious challenges and barriers exist to hinder that successful change, but – usually – the youth succeeds in their transition. Social, political, and economic climates can impact success rates in earning admittance to higher education, completing a degree, and finding employment (Bowman, Borlagdan, & Bond, 2015). With the rising prevalence of TBI among the nation's youth, new research demonstrates a unique set of barriers that add to the already tremulous experience of transitioning from education to work specific to those youth and veterans who have

experienced a TBI. Several narratives have documented the challenges of simply

pursuing a college degree and navigating the challenges of living on campus (Cahill, et

al., 2014). These accounts highlighted three main themes preventing feelings of

confidence and belonging to a college environment: the balancing act, reality versus

injury, and feeling like a square peg in a round hole. Despite the existence of disability

services for managing the daily chores of being a college student, these individuals often

found it simpler and more effective to rely on self-made strategies for managing their

daily tasks. Despite this, many still felt the challenge of making friends, lacking the

confidence in their abilities, and significant anxieties with test taking and school

responsibilities. Now consider the added challenge of developing job experience and

building a decent resume to have a chance at gainful employment, and then the additional

stresses of how to interview successfully, manage the daily routine, meeting a new cohort

of co-workers, learning the new job, adapting to the environment, etc.

Several factors influence a return to work for any individual who has experienced

a TBI, regardless of severity of injury. A thorough review of the research literature

highlights these factors as: (1) individually adapted rehabilitation, (2) motivation to return

to work, (3) cognitive and social abilities post-injury, (4) presence of medical symptoms,

and (5) emotional dysregulation (Artman & McMahon, 2013; Matérne et al., 2017;

American Heroes At Work, 2018). Each of these factors plays key roles in determining

an individual's comfort and readiness to return to work successfully and effectively. At

the center of each article, the use of an adapted vocational rehabilitation or supported

employment program was successful in achieving that return to work. While almost

every article focused on a population of working aged individuals that excluded students in their analyses, the process of using supported employment or a vocational rehabilitation program can be generalized to include any individual who has a history of TBI. Importantly, factors that correlated highly with a successful return to work included those individuals whom have achieved higher education, higher self-efficacy, and interventions in the workplace while primary limiting factors included significant nausea and vomiting early in injury, severe pain associated with injury, and limited job independence (Cancelliere, et al., 2014; Cancilliere, et al., 2016; Samra-Grewal, 2000). Finally, the percentage of individuals who return to work post-injury within 1 year is 40.7% and 40.8% of people return to work within 2 years of injury (Van Velzen, et al., 2009). While this number is not particularly high or motivating, it is unclear whether any of the participants sought supported employment services to assist with the transition back to work.

Further research into TBI-related sequelae and how it impacts young, college-age adults is crucial to understanding that transition from injury to postsecondary education to gainful employment. Overall, the factor outlined previously for working age individuals are almost exactly mirrored in college students also having suffered a TBI. The major discerning factor was access and use of employment preparation services, family socio-economic status at time of injury, and injuries occurring later in life (Todis, et al., 2011). Similarly, those individuals experiencing TBI-related symptoms whilst actively pursuing postsecondary education who utilized disability transition services and support agencies were directly correlated with success in their academic careers (Todis & Glang, 2008).

To address the well-documented academic and employment-related obstacles that await working age adults with TBI following their injuries, Project Career, a multi-site five-year initiative funded by the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR) was designed to promote cognitive support technology (CST) use and employment success among college and university students with TBI. The goal of Project Career is to develop, implement, and test a technology-driven, long-term, and resource-rich individualized support program that merges the use of cognitive support technology (CST) and vocational rehabilitation (VR) practices to improve the career readiness and employment outcomes of civilian and veteran undergraduate students with TBI (Minton et al., 2017). Across the five-year work plan, Project Career endeavors to yield evidence-based practices that address the cognitive, academic, and vocational needs of this population, thereby providing an integrated and holistic approach for improving the long-term employment outcomes of postsecondary students with TBI.

Several important contributors to the problem affecting individuals with TBI to effectively complete an academic degree and eventually gain and maintain employment resulting in independent and self-reliant lives can be identified:

1) *Mild TBIs result in long-term effects that compromise academic performance in college-age students*. Traumatic brain injury is rated by the severity of the initial physical trauma that caused the injury. The terminology of mild or moderate TBI does not indicate the severity of the consequences of the injury. Although a TBI might be rated as mild or moderate, the young person may experience significant

long-term effects. Researchers report that college students who had a TBI experienced long-term and pervasive symptoms impacting their academic performance (LaForce and MacLeod, 2001 & Kennedy, Krause, and Turkstra, 2008).

2) *The positive impact of education for young people with a TBI is not as clear.* Wehman, Chen, West, and Cifu (2014) reported that of the 200 participants, 51% held current employment at the 10-year follow up and 73% were employed at some point following high school. A major finding of this study suggested that those participants who held goals for post-secondary education were more likely to find employment following high school, especially with strong student engagement and outside organization support. This directly supports the U.S. Department of Education's (2014) stated goal for education: "The goal of education is eventual employment and higher education levels translate to higher earnings" (p. 2014).

3) *Barriers* include the effects of the disability itself, lack of education or training, limited use of assistive and general-use technology to accommodate the cognitive impairments caused by TBI, lack of role models within the disability community, and negative perceptions of employers (Bureau of Labor Statistics, 2018).

The above limitations highlight the challenges that college students with TBIs face daily, and also give credence to the difficulty of finding and maintaining gainful employment following graduation. Research shows that the implementation and use of experiential learning (i.e. internships, fieldworks, residencies, etc.) vastly improves the transition from graduation to establishing gainful employment (Eyler, 2009; Bowman,

Borlagdan, & Bond, 2015; Burgstahler, 2013; McDiarmid, Rapp, & Ratzlaff, 2005). This project proposes to ease the transition and promote successful gainful employment with as few pitfalls as possible using a uniquely motivating and occupationally engaging environment.

A distinguishing feature of this doctoral project – and tentative barrier – is the use of craft beer brewing to host an internship initiative promoting job skills development and hire-ability of college adults with TBI. A brewery is host to a wide variety of intensive, varied, and occupation-based jobs, including specialized craft brewery training, basic office training, and integrated customer service experience. While breweries inherently put visitors in contact with alcohol, the craft brewing industry prides itself on its production of a quality product. Additionally, this industry is fast growing with a 5% increase in craft beer sales in 2017, and an overall beer market of $111.4 billion (Watson & Herz, 2018). U.S. craft beer production rose 5%, adding to the overall 70.6% rise in regional beer produced last year alone. This effusive industry is ripe for an innovative internship program centered around promoting unique job skills experience to a population of college students with TBI.

In summary, the proposed doctoral project will investigate an innovative area of future employment for students with TBI within the brewery industry through: 1) *understanding* the basic disability supports and rights for individuals with TBI (e.g., Americans with Disabilities Act (ADA), Affordable Care Act (ACA), etc.), 2) *analyzing* the brewery industry and any policies related to employment of an individual with a TBI and accessibility within the brewery, 3) *evaluating* the feasibility of using the brewery as

a place of employment for individuals with a TBI such as those participating in Project

Career, and 4) *determining* the most effective supported employment model for

individuals with TBI.

CHAPTER TWO – Project Theoretical and Evidence Base

<u>OVERVIEW OF THE PROBLEM</u>

Among the Traumatic Brain Injury (TBI) community, there are significant

numbers of people striving for higher education in the hopes of pursuing fruitful careers

(Graham, et al, 2016; Bowman et al., 2015). However, the impact of symptoms arising

from TBI slow progress towards those goals and may effectively limit full participation

for individuals in strenuous curricula at two- and four-year colleges/universities. These

challenges act as a barrier to achieving and participating in meaningful work and

activities. When coupled with the social and environmental obstacles associated with all

levels of TBI, it is no wonder the large number of individuals who have difficulty

achieving their goals (Todis & Glang, 2008; Todis, et al., 2011).

Two theories function as the theoretical foundation for this doctoral project: Self-

Determination Theory (SDT) and the Adult Learning Theory (ALT). SDT assumes that

there exists a continuum of motivation designed to fulfill people's three basic

psychological needs: autonomy, competency, and relatedness (Ryan & Deci, 2000).

Meanwhile, ALT represents how adults learn and process information different from

children. These theories combine to inform and design a vocational internship program

through the ideas presented in the explanatory model (see Appendix A).

Ryan and Deci (2000) determined that humans have an inner drive for personal

growth and development, better explained as motivation. The features that make this

theory unique are the three basic psychological needs (autonomy, competency, and

relatedness) that act as the pillars upon which this growth is built. Within each person

exist two variants of motivation that affect choice and regulate behavior: intrinsic and external motivation. Intrinsic motivation is "the inherent tendency to seek out novelty and challenges, to extend and exercise one's capacities, to explore, and to learn" whereas external motivators affect "the performance of an activity in order to attain some separable outcome" such as rewards, deadlines, threats, imposed goals, etc. (Ryan & Deci, 2000, p. 70-71). These external factors greatly impact the progress towards constructive social development and personal well-being by inhibiting the need for autonomy, competence, and relatedness. The authors (2000) cite field research on motivation that demonstrate two key features: 1) teachers who use autonomy in their curriculum promote and foster creativity, intrinsic motivation, and the desire for challenges; 2) those who teach with an authoritative approach tend to strangle their students' initiative and reduce their capacity for learning. Thus, SDT will aid in the design of this internship program by facilitating choice and intrinsic motivation to attain job skills and promote integration and creativity, rather than providing goals and deadlines for completion of tasks to pass and move onto the next job/task/program etc.

Knowles' (1973) concept of andragogy and its four assumptions for describing the characteristics of change between child and adult learners strengthen the foundation of the proposed doctoral project. These four assumptions – self-concept, experience, readiness to learn, and orientation to learning – highlight the adult's capacity for learning on a higher level, especially with experience. Knowles posits that as an individual matures, they tend to collect experiences that prompt further learning through an innate desire for knowledge. This is a crucial component to the model for explaining how young

adults and veterans will seek to become gainfully employed and effective participants in society. As adults recently graduated from two- and four-year colleges/universities, the participants in the internship program are ready and willing to put their education into action. The addition of a fifth assumption to Knowles' andragogy theory – motivation to learn – directly connects SDT and ALT for this doctoral project (Smith, 2002).

These two theoretical perspectives are clearly linked and grounded in the adults' capacities for self-direction and personal growth to either become or enhance their roles as productive and valued members of society. In order to create a successful internship program, these theories act to bridge the gap between student and worker by facilitating autonomy and the growth of job skills. The use of SDT explains why these adults will participate in the internship program and the ALT determines how to present the experience for optimal gains.

PREVIOUS ATTEMPTS TO ADDRESS THE PROBLEM

There are many programs to assist all people with disabilities in graduating from schools and colleges, as well as to find and maintain employment. Project Career is one such program that has positive outcomes of an effective model. In an effort to improve academic and employment outcomes for undergraduate students with cognitive disabilities as a result of a TBI, Project Career helps students and veterans with TBI attending two- and four-year colleges/universities to learn and utilize compensatory strategies for successful achievement of desired degrees, specifically through the use of cognitive-assistance technology and peer-mentoring services. Peer mentoring will be a major feature of this proposed doctoral project to further improve the internship

experience and help navigate the transition from school to work. The daily life challenges of being a college student with TBI are well documented (Cahill, Rotter, Lyons, & Marrone, 2014; Cicerone, 2002; Whyte, Polansky, Fleming, Coslett, & Cavallucci, 1995). These symptoms and challenges do not disappear upon completion of a college degree, and the transition from education to work is volatile leading to higher rates of youth unemployment and ineffective programs for increasing employment rates (Bowman, et al., 2015). In order to ensure an empathetic response to the challenges faced by students with TBI, a peer mentoring system composed of students with TBI is highly recommended and beneficial to achieving the outcomes of this doctoral project (Hibbard, Cantor, Charatz, Rosenthal, Ashman, Gundersen, Ireland-Knight, Gordon, Avner, & Gartner, 2002; Boosman, Visser-Meily, Post, Lindeman, & Van Heugten, 2012; Cahill, Rotter, Lyons, & Marrone, 2014).

Despite Project Career's success at assisting students with TBI to finish college successfully, for many students there is continued difficulty finding work following graduation despite academic and vocational supports. This doctoral project proposes to use a transitional internship program in order to build job skills and employability for achieving and maintaining gainful employment. A brewery will function as the environment for this internship program for multiple reasons: 1) breweries offer a multitude of experiential options for learning job skills applicable to many career paths; 2) craft brewing is a quickly rising industry, allowing for cultivation of creativity, passion, and opportunities not otherwise found in contemporary supported employment programs; and 3) beer offers a functional and practical connection with young adults and

veterans recently graduated from university to transition into the working world.

There is a void in the evidence literature supporting the use of a brewery as a setting for this proposed model of transitional internship. However, supported employment programs have demonstrated success in a variety of settings such as IKEA, trade industries, Goodwill, Wal-Mart, Home Depot, and supermarkets (Bowman et al., 2015; Goodwill, 2018; BARC, 2018). A brewery functions in many of the same aspects as these industries with opportunities to learn basic office skills, communication, customer service, sales training, and job-site social skills, as well as the added bonus of specialized skills in brewing science.

Research on TBIs is well documented, with the literature describing the symptoms and issues that prevent full participation in academics and employment (McNamee et al., 2009; Gamble & Moore, 2003; Kushner & Johnson-Greene, 2014; Kennedy et al., 2007; Cahill et al., 2014; Marschark et al., 2000; Whyte et al., 1995). Primarily, the most limiting issues of TBI with academic and work achievement are related to cognitive ability, attention, and problem solving, however a major barrier related to acquisition of supports stems from stigma. Stigma is a bias that has plagued people with disabilities for decades, but specific to TBI, can be extremely detrimental to school and work performance by reducing the opportunities afforded and attention given to those who have suffered injuries in the past (Désiron, et al., 2011; Zuger, et al., 2002; Bubar, 2018). Arguably, veterans have the most difficulty with handling stigma from educators and employers, as they have to deal with both having a military background and frequently have suffered TBI or other similarly debilitating diagnosis (Gonzalez &

Elliott, 2015). Fortunately, the Department of Veterans Affairs (VA) devotes time and money into researching functional gains for soldiers requiring supported services to reconnect with society once returned from active duty (Twamley, et al., 2013; McNamee et al., 2009; Kushner & Johnson-Greene, 2014; Kennedy et al., 2007). Unfortunately, the comorbidities often seen in the veteran population could significantly impact perceptions of this population's ability to recover enough to become gainful members of society, and their association with the military could be a detriment to their opportunities (López, et al., 2015; Gonzalez & Elliot, 2015).

Regardless of military affiliation, young adults who have a TBI may be limited in their ability to perform successfully in the classroom, and therefore lose out on future career prospects. However, as disability rights and activism has grown in the last 20+ years, so too has the availability of disability services at colleges and universities. Often, the services are designed to support issues unrelated to TBI, and students will often utilize strategies and supports devised independently (Cahill et al., 2014). Research-driven projects designed to support students with TBI – i.e. Project Career (BU) – provide supports for managing the organizational and temporal difficulties of daily student life through supportive technology and peer-mentoring services, however fail to bridge the gap from graduation to gainful employment. However, there exist a mélange of endeavors to provide more support with work-transitional programs for students with TBI that encompass curricula partnered with job experience (McDiarmid, Rapp, & Ratzlaff, 2005; Burgstahler, 2013). These programs seek to use semester-based learning and internships to allow students with TBI and other disabilities the opportunity to gain

hands-on experience for boosting employment success following graduation. Success is widely achieved, as well is supported by more research stemming from government-sanctioned programs such as supported employment initiatives and vocational rehabilitation centers. General feedback from supported employment supports its success, which is not hard to believe as it makes sense to find achievement in a task when provided support throughout the process (Graham, et al., 2016; Malec & Moessner, 2005; Wehman, et al., 2000). What are difficult to determine, however, are the benefits of these services for people with TBI, and more specifically, how a brewery could be an appropriate (albeit unconventional) setting for such a design.

As this doctoral project proposes using a transitional internship program, a review of the evidence literature included the stipulation of paid versus unpaid internships; and the degree of impact this choice had on outcomes. Results were interesting with almost all articles highlighting the benefits of internships on employability regardless of payment status (Eyler, 2009; Bowman, Borlagdan, & Bond, 2015; Discenna, 2016; Smith, Smith, & Caddell, 2015). However, when analyzing the survey responses between employer and intern, a discrepancy arose. Most interns believed that being paid would be nice, but the majority argued that the work experience was their motivating factor in participating. On the other hand, the employer noted the economical benefit of paying the interns for both rewarding exceptional work and incorporating the intern into the team aspect of the company (Shoenfelt, Stone, & Kottke, 2013; Smith, Smith, & Caddell, 2015; Discenna, 2016). Additionally, the use of internships to promote work experience for persons with disabilities has positive impacts for reducing employer and

peer stigma, while increasing overall perceptions of employability this population (Mills, 2017).

Several limitations impact the quality of the evidence supporting this transitional internship model. Many of the articles are based on foreign supported employment programs and systems, and therefore may not be feasible for replication in the United States (Murphy, et al., 2006; Bowman, Borlagdan, & Bond, 2015). Additionally, many articles lack the generalizability to be applied to this population or simply have no significant results to support positive outcomes (Graham, et al., 2016; Gamble & Moore, 2003). Finally, only one article had randomized control samples to determine causal relations between use of supported employment system and increases in employability (Graham et al., 2016). That being said, the evidence overwhelmingly points to the use of transitional internships to bridge the gap from academics to gainful participation in society. Overall, the research on using work-placements and job-supports is positive, being both agreeable to any experience in the field having infinitely greater benefit towards receiving employment offers while also deigning to be economically viable for companies to agree to participate (Gault, Leach, & Duey, 2010; Shoenfelt, Stone, & Kottke, 2013; Taylor & Hooley, 2014; Bowman, Borlagdan, & Bond, 2015; Eyler, 2009; Graham et al., 2016).

Summary Discussion

The use of a pilot internship program for young adults and veterans with TBIs graduating from 2- and 4-year colleges/universities is a feasible intervention for promoting successful gainful employment among this population. Supported

employment has long been championed by state organizations and federal and local governments, however the use of a brewery setting increases the challenge of establishing this programs credibility. That being said, there is little doubt to the effectiveness of an internship on increasing employability and developing pertinent job skills in a population with limited work experience or challenges operating in a work environment. Through a combination of theoretical approaches, ideas drawn from the peer mentoring in Project Career, and application of established internship principles, this pilot program will increase the employability and job confidence for these young adults and veterans.

CHAPTER THREE – Description of the Program

The Supported Brewing Initiative is a pilot internship program designed to promote acquisition and retention of basic job skills with the goal of eventual gainful employment. This internship is designed for young adults and veterans 21 years of age or older who are currently attending or recently graduated from a two- or four-year college or university and have a history of TBI with recurrent symptoms. However, due to the environment in which this program occurs, those individuals who have a history of substance abuse will be excluded from the program. This program will be based out of local breweries and will allow for 4–6 participants depending on the size of the brewery and availability of staff.

A thorough review of the evidence literature on work traits highlights the importance of the "Big Five," a set of five sought-after personality traits of effective employees that has remained consistent for decades (Tett & Burnett, 2003; Barrick & Mount, 1991; Soldz & Vaillant, 1999; Judge & Zapata, 2015). These five personality traits are: 1) Extraversion, 2) Agreeableness, 3) Conscientiousness, 4) Neuroticism (or Emotional Stability), and 5) Openness to experience. Throughout each module of this program, these traits will be addressed, practiced, integrated, and ultimately acquired for transition from internship to gainful employment. The World Association for Supported Employment (WASE) has outlined several phases, which make up the supported employment model:

- Assessment

- Job finding

- Job analysis

- Job matching

- Job (re)design

- Introduction into the workplace

- Training on the job/coaching

- Support outside the workplace

- Ongoing support

While these phases are important to the foundation of a SE program, WASE recognizes the unique character of each person participating in such a program and that not everyone requires every phase to be successful (Kamp, Lynch, & Haccou, 2018). For the purposes of this doctoral project, the first four phases have been completed or assumed unnecessary to the program's success. Job (re)design will occur throughout the program in order to accommodate any difficulties that arise for any participant. The remaining phases are outlined below, with the addition of a recruitment phase for gathering a participant pool to conduct the Supported Brewing Initiative:

1. Recruitment

Recruitment for the Supported Brewing Initiative will begin with flyers distributed to those students engaged in Project Career (see Appendix C). Based on availability of participants, emails will also be sent to student support centers (i.e. Offices of Disability Services, Admissions, University Services Center, Educational Resources

Centers, and faculty advisors), local breweries, and state-sponsored TBI programs and associations with detailed information regarding the internship seeking to refer eligible students and graduates as appropriate. Six applicants will then be selected based on inclusive criteria and offered internship positions based on a competitive hiring procedure. The inclusive criteria are: young adults and veterans 21 years of age or older who are currently attending or recently graduated from two- and four-year college or university and have a history of TBI with recurrent symptoms.

Additionally, peer mentors must be recruited to support the participants as they navigate the transition from school to work. Emails with attached flyers will be distributed to those peer mentors who went through Project Career, graduated, and achieved gainful employment within one year of graduation. Following the first year of the program, peer mentors will be recruited from the graduates of the Supported Brewing Initiative.

2. Introduction to the Workplace

Orientation will be the official matriculation into the internship and occur at designated job sites (i.e. breweries). The purpose of this step is six-fold: (1) allow an opportunity to familiarize with the brewery setting and associated modules; (2) review expectations of interns (i.e. hours, dress code, responsibilities, time off, pay, etc.); (3) review safety regulations and requirements; (4) match with peer mentors; (5) collect baseline data; and (6) collaboratively set goals. Once the interns are exposed to all areas of the brewery and the review of procedures is complete, each intern will be matched

with a fellow intern as a peer mentor, as well as introduced to the supervising

occupational therapist (OT). The peer mentoring system is well established through

research on Project Career, which highlights the reflective and supportive nature of peer-

to-peer mentorship (Kersten et.al, 2015). The peer mentors for the first group of interns

will be selected from a pool of Project Career mentors who have graduated and

successfully achieved gainful employment within a year of graduation. These groups

will then meet privately to perform the following:

- Applicants will sign a consent form to allow collection of baseline data and
  demographic information
- Initial Big Five Inventory will be filled out to assess baseline personality traits
  (See Appendix D)
- Initial Job Confidence Questionnaire will be filled out (see Appendix E)
- OT will conduct a modified Job Interview Scale (adapted from Regent
  University, 2018) and establish baseline score (see Appendix F)
- OT will collaboratively set goals using the Occupational Performance History
  Interview (OPHI)

The orientation process is crucial to establishing the expectations and routines of

the entire pilot program, with a major component of success determined by the peer-to-

peer mentorship. Participants will be matched within their group with a peer. Several

studies support the pairing of peers whom have similar experiences, and thus bolster the

relationship to improve overall outcomes (Strutchen, Davis, Bogaards, Hudler-Hull,

Clark, Mazzei, Sander, & Caroselli, 2011). For this program, peers will be matched as

closely as possible to those who have similar experiences. Each intern will be supplied

with a copy of the Intern Onboarding Manual (see Appendix G) to be reviewed with their

peer. The supervising OT and brewery staff each will receive and review the Manager

Onboarding Manual (see Appendix H). The purpose for these manuals is to highlight the

program's mission and vision, as well as provide a timeline and checklist for achieving

the internship outcomes and training for becoming a peer mentor using materials from

Project Career. Examples of each assessment will be included, as well as sample

scenarios for handling various situations that may or may not occur during the internship.

This training is directly adapted from the Project Career process, with goals of the

training as follows:

- Introduce all mentors/staff/interns to purpose of the program

- Discuss their roles and responsibilities

- Help interns develop the necessary skills for success in the program

- Introduce all interns to their fellow participants

- Present available supports to the participants and supervisors

- Answer any questions and discuss concerns (Hibbard, et al., 2005)

3. Training on the job/Job Coaching

Following the orientation process, the interns will be randomly assigned to their

first track assignment, chosen from either the Brew Floor or the Tap Room. Since all

interns will participate in both tracks by the end of the internship, the order in which

tracks occur is assumed to have minimal effect on outcomes. To further explain the

decision to use these two track choices, it is important to explain the nature of the brewing industry.

Breweries are highly complex businesses with a multitude of job positions, employees, safety regulations, and technical equipment requiring specialized training to operate. Here is a quick review of brewery definitions and statistics in the United States:

There are four types of craft breweries, as well as two non-craft known as regional and large breweries. In order to qualify for craft brewery-ship, the company's production must be small (annual production of 6 million barrels [bbl] of beer or less), independent (less than 25% of business is owned or controlled by a beverage alcohol industry member), and traditional (a majority of total beverage alcohol volume comes from beers derived from traditional or innovative brewing ingredients and fermentation). Brewery systems range from 30 bbl (microbrewery) to well over 100 bbl per brewing cycle (macrobrewery, think Budweiser). By the end of 2017, craft beer sales volume rose 5%, and made a 12.7% share of all beer sales in the United States. This sales growth translates into jobs, as there were more than 456,000 full-time jobs with 128,000 of those directly at breweries and brewpubs (Brewers Association, 2018).

Based on the previously described statistics, it is clear that breweries are a major industry and are quickly earning respect as meaningful and gainful employment. These values also highlight the number of available employees who could serve as mentors within the brewery environment to allow for the proposed number of interns.

As a pilot program, the internship will incorporate two main modules for promoting meaningful acquisition of the aforementioned job skills and experience: the brew floor and the taproom/customer service operation. As a major draw for participants to this program is the opportunity to work in a brewery and learn brewing science and principles with the opportunity to enjoy the fruits of their labor, these two areas were chosen as the most relatable and meaningful modules to accomplish the program's goals. Time frame for this program will last approximately one semester (~12-15 weeks), with time allocated to each module outlined below. Limited evidence validates the need for a semester's length internship, however a variety of theories exist proposing the appropriate length of time for acquiring a new skill. Some researchers strongly support the need for 10,000 hours of dedicated practice to achieve mastery of a skill (Gladwell, 2008; Ericsson et al., 1993; Syed, 2010) whilst others deem only a few months of immersive experience adequate for competence in a particular field (Martorello, 2006). This pilot internship program is based mainly on the practicum experience outlined for the Sargent College of Health and Rehabilitation Sciences, specifically for the Master of Science in Occupational Therapy Level 2 Fieldwork experience (Johnson & Zagarella, 2008).

Brew Floor

On the brew floor, the participants will have the opportunity to both shadow and engage in all the tasks that create craft beer. This module exposes the interns to a variety of jobs that are required to produce just a single barrel of drinkable beer. The brewing

process, while automated, is a highly complex process (see Figure 3.1) that requires multiple steps and careful planning to execute properly. Why is this important? Simply put, tasks need to be completed at precise times and with utmost calculation in order for the operation to function smoothly. Thus, work on the brew floor incorporates each of the above desired job skills albeit in a uniquely engaging manner. This module is planned to encompass ¾ (roughly 8-10 weeks) of the entire internship due to its implicit complexity and immersive engagement in the meaning behind the industry.

Figure 3.1 – Brewing Process

ASLAN BREWING Cº
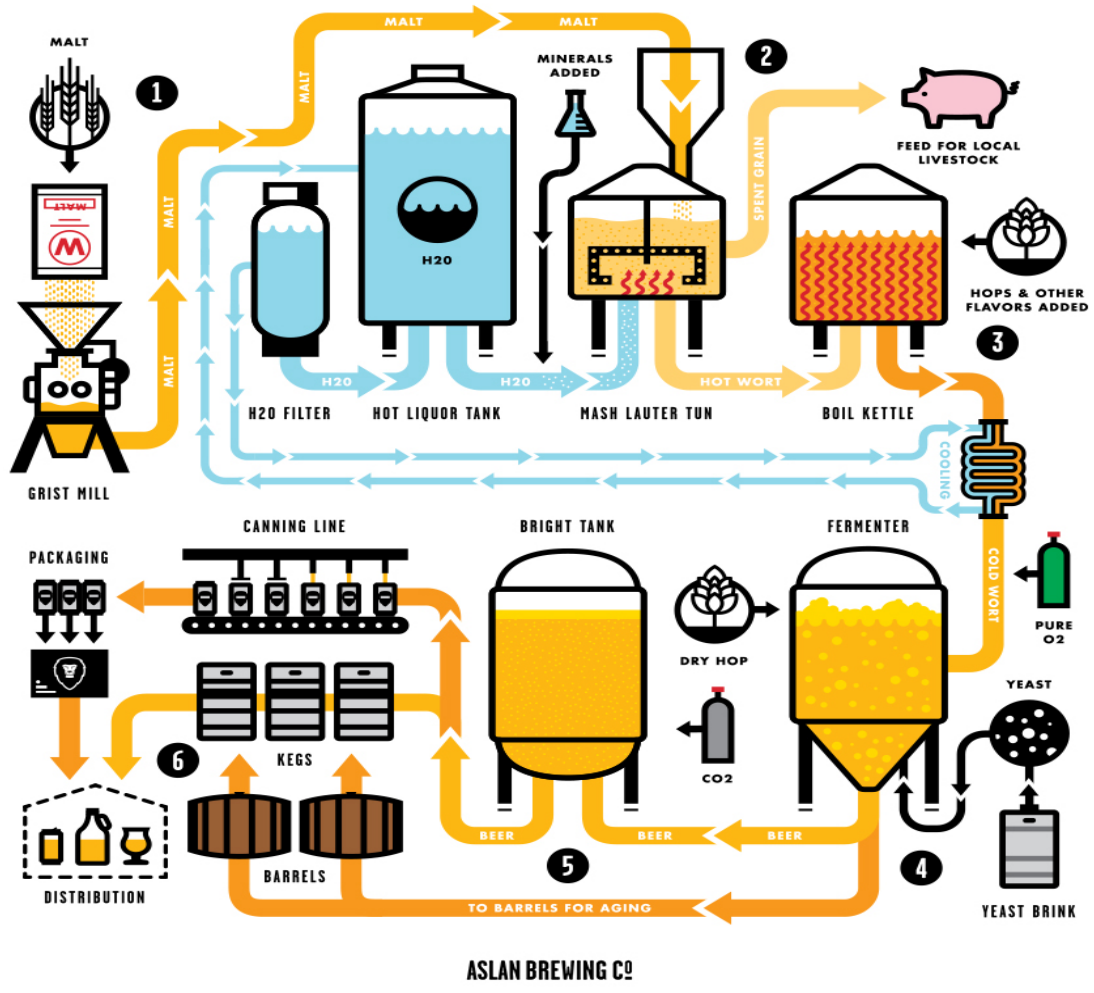
While unique, the brewing industry is an untapped market for promoting occupational therapy advocacy and engagement. Work and industry is a key practice area and allows OT to develop interventions for promoting an innate human occupation (AOTA, 2018). A brewery offers several components of the AOTA's practice definition, including increasing opportunities to help individuals return to work, provide strategies to access work, and promote economic rewards, quality of life, and fulfillment through active participation in a meaningful career. Despite the stigma associated with alcohol and its production, craft brewing offers a novel environment in which to advocate for widening OT's scope of practice and advance AOTA's stance on inclusion in any work environment.

Customer Service

The second quarter (4-5 weeks) of the internship program will involve direct customer interaction through 3 sections: (1) Taproom; (2) Gift Shop; and (3) Tour Guide. Pending the size and design of the participating brewery, this module may vary widely. While the brew floor provides hands-on, context-specific, and occupation-based experience, this module allows for demonstration and practice with social interaction/communication, critical thinking through money management and bartending, and consistent organization to accomplish each task efficiently. Job coaching is crucial to this section in order to manage challenges and coping strategies that limit interaction with customers and co-workers.

4. Culmination

The final stage of the internship program will involve a re-assessment of the evaluation tools used during the intake stage. Each intern will meet for a final job interview with their mentor and receive scores on their modified Job Interview Scale (see Appendix F). Additionally, each intern will complete another Job Confidence Questionnaire (see Appendix E) and a post-test BFI (see Appendix D) to assess any change in personality traits associated with work ethic.

Follow-up data will be collected at the 3-, 6-, and 12-month intervals following completion of program to assess job confidence, employment, and competitive wage earnings using an emailed Follow-up Survey and feedback form (see Appendix I), lasting no more than 5-10 minutes in duration.

5. Ongoing Support

Due to the outlined timeframe in which the Supported Brewing Initiative will occur, ongoing support from the brewery is not necessary to put in place. However, this phase is important to ensure successful gainful employment per WASE handbook and the lead OT practitioner will be available as a resource for all participants up to one year from end date of their internship (Kamp, Lynch, & Haccou, 2018).

Conclusion

This pilot program is designed to allow opportunities for job experience and

provide greater prospects to young adults struggling with the label of a TBI and the difficulties involved with recovery. Through partnership with local breweries, the program offers a unique and age-related environment designed to teach new potential career options while adding to and building current resumes. Overall, the design and implementation of this doctoral project will promote autonomy and offer significant opportunities for job growth and eventual gainful employment.

CHAPTER FOUR – Evaluation Plan

<u>INTRODUCTION</u>

The evaluation of the Supported Brewing Initiative will involve three program evaluation components: (1) evaluating the effectiveness of the program on development of the Big Five work traits, (2) evaluation of the effectiveness of the internship to promote job skills training, and (3) evaluation of employment successes following completion of program – time to job offer and job retention of at least one year. Program evaluation of the employment data and effectiveness of the program to promote job skills retention will use quasi-experimental pre- and post-test procedures. These outcomes will be used to determine the effectiveness of the internship program in successfully promoting gainful employment for these participants.

<u>EVALUATION OF DEVELOPMENT OF BIG FIVE WORK TRAITS</u>

Purpose

In order to assess the effectiveness of developing the Big Five personality traits throughout the internship, qualitative and quantitative evaluation strategies will be implemented as part of the overall evaluation plan. The importance of these personality traits is well documented and crucial to success in earning gainful employment (Tett & Burnett, 2003; Barrick & Mount, 1991; Soldz & Vaillant, 1999; Judge & Zapata, 2015). This evaluation will determine the development of the Big Five personality traits desired by employers.

Evaluation Plan

Participants

The proposed pilot internship program will take place at a local brewery, and the participants will be the same as described in the evaluation plan. Inclusion criteria will include a medical diagnosis of a traumatic brain injury (TBI), work-ready fitness for lifting at least 50lbs, and attending or recently graduated from a 2- or 4-year college or university. Exclusion criteria will include anyone unable to meet the minimum fitness requirements for working at a brewery, diagnosed history of substance abuse or stay in substance rehab facility, and inability to participate in outcome measures. As the program grows and develops, the participant pool may be expanded to include qualitative data from the lead OT practitioner, brewery staff, and peer mentor groups.

Evaluation Design

Survey Evaluation

During the matriculation and orientation phases of the program, the participants will be given the Big Five Inventory (BFI) to determine their current personality traits. Qualitative surveys will be issued to assess **job confidence** and **feedback on program design** to each participant, while quantitative data will be measured with pre-/post-test data from the BFI. Data will be collected at three time points throughout the program:

1. At the end of the first week of the internship to assess immediate impressions and confidence participating in work environment

2. After six weeks to assess thoughts and feelings on development of work traits

3. At completion of internship to assess overall feelings of the program, subjective thoughts on development of Big Five traits, and impressions on impact of work traits

on future careers

Following each time point described previously, each individual will be emailed a survey link through Survey Monkey® to collect data consisting of 5 Likert Scale questions and 2-3 mandatory free response questions. This platform was selected due to its ease of use and free access to software. The lead OT will follow-up with participants within two days of deadline to maximize engagement in the survey responses. The evaluation design is described in more detail in Table 4.1.

Table 4.1 – Evaluation Design

Dependent Variable	Independent Variable	Outcome Measure	Administration	Measurement Procedure/Data Analysis
Confidence with job participation	Supported Employment Internship Program	5 Likert Scale survey questions and 2-3 mandatory free response questions	Electronic survey sent at end of first week, six weeks, and completion of program	Survey items will be developed by the lead OT and crosschecked by a trusted OT colleague to ensure maximal validity/reliability of the measure. Surveys will be collected from each participant via email with perceived change in confidence and work traits measured by 5-point Likert scale. Data will be analyzed at each time point and compared across duration of program to assess perceived change. Adequate facilitation of positive experiences and improvements in job confidence determined by average scores of 3.5 or higher on final survey.
Growth of Big Five work traits				
Satisfaction with program experience				

Practical Considerations and Summary

Due to this program's pilot nature, initial development of brewery relationships, outcome measures, and evaluation tools will be the responsibility of the lead OT. Once the initial processes and tools are in place, the program will develop into a sustainable and less time-consuming venture allowing training for additional program personnel to assist with data collection and management. Through successful implementation of the initial evaluation plan, repeat outcomes measures will be gathered more efficiently and in turn, feedback will modify and improve the data collection plan.

EVALUATION OF JOB SKILLS GAINED AND EMPLOYMENT SUCCESS

Purpose

The purpose of this component of the program evaluation is to examine the effectiveness of the practicality of the internship and its applications for each participant to pursue gainful employment following completion of the program. Supported employment is a well-established program with evidence-based literature that promoted its use across a variety of work placements (Eyler, 2009; Bowman, Borlagdan, & Bond, 2015; Burgstahler, 2013; McDiarmid, Rapp, & Ratzlaff, 2005). However, the model's use in a brewery setting has never before been used, let alone researched, and due to the limited evidence to guide intervention procedures, this program will rely on variations of established methodology to conduct an evaluation. The primary research questions are:

1. Does the use of a brewery setting promote appropriate job skills acquisition for success in the working world?

2. Does the use of a brewery setting for a supported employment-focused internship relate

directly to increased job offers and employment retention for at least one year?
While the primary evaluation plan will involve a quality assurance program, long-term evaluation of the program and developed practice guidelines will include a more formal research study. As the program grows in size and legitimacy, the program will require more rigorous evaluation and experimental standards. This means application and pursuance of IRB approval for clinical research study to be initiated. In addition to IRB approval, there must be collaboration with the US Department of Agriculture and state/local alcohol agencies to adhere to legal standards. Throughout the program, the lead OT will collaborate with the brewery team to maintain compliance with all legal and practice standards related to quality assurance and clinical research studies.

Evaluation Plan

Setting/Participants

The participants in this section of the evaluation plan are exactly the same as described previously.

Evaluation Design

To complete this evaluation, a quasi-experimental pre- and post-test design will be utilized. Several factors influenced this decision including the number of participants in the program, length of internship, factors influencing practical data collection, and the pilot nature of the internship program. Given these, barriers/limitations, a quasi-experimental design has been determined to be most beneficial to assess outcomes of the program related to direct participant assessment and intervention. This program

evaluation is outlined in Table 4.2.

Table 4.2 – Program Evaluation Plan

	Brewery Setting
Participants	6 graduates with TBI from Project Career seeking gainful employment
Data Collection Points	Orientation or within 2 days of orientation
	6 weeks after orientation
	15 weeks after orientation
	6 months following completion of program
	12 months following completion of program

Variables and Outcome Measures

Evidence from a variety of supported employment studies have shown that major factors determining a participant's work success are directly related to their quality of life (QOL) and perceptions of confidence with task completion (Désiron, et al., 2011; Oka, et al., 2004; Zuger et al., 2002). Thus, the primary dependent variables for the evaluation of this program's job skills and employment success outcomes will be confidence with job skills, length of time to employment following completion of the program, and job security 6 and 12 months after hire date.

Baseline measurements will be taken during the orientation phase, and follow-up measurements will occur at 6-weeks, 15-weeks, 6 months, and 12 months from completion of the internship program. All measurements and interventions will be conducted by the lead OT with minimum 2 years field experience. Descriptions of the assessments that will be used are outlined in Table 4.3.

Table 4.3 – Assessments

Assessment	Description/Rationale	Data Collection Points	Measurement
Big Five Inventory (BFI)	The participants will complete to gather initial assessment of baseline personality traits (John & Srivastava, 1999)	Orientation 6 weeks 15 weeks	1-5 scale for 44-item questionnaire
Modified Job Interview Scale	This performance measure quantifies interview preparedness and quality to determine job skills retention (Regent University, 2008)	Orientation 6 weeks 15 weeks	1-5 scale using interview questions with comments section
Occupational Performance History Interview (OPHI)	This interview allows the lead OT and each participant to learn about their past work, play, and self-care performance, and assess changes to their overall QOL (MOHO, 2018)	Orientation 15 weeks	1-5 scale and Life Narrative
Employment Survey	This short phone survey collects data on each participant's employment status following program completion	6 months 12 months	3 brief questions

Measurement Procedure & Data Analysis Plan

      The lead OT will be trained on the evaluation procedures outlined in the

Onboarding Manual (see Appendix H) and the data collection plan as indicated for each

measure highlighted above. Data will be graphed for visual analysis and Z statistics will

be completed using the data collected for each participant. Analysis may include

celebration line analysis, binomial test, and C and Z statistical tests.

<u>Practical Considerations</u>

      While this program is designed to be as inclusive and cognizant of each

participant's symptoms, and all ethical considerations for withdrawing interventions will

be addressed, the quasi-experimental design will offer the greatest objectivity while maintaining the integrity and benefit of intervention for each participant. Attendance may be an issue due to individual symptom management. However, there is limited evidence on the use of a brewery setting as supported employment intervention. As such, any evidence obtained will be beneficial in guiding practice and future research.

Conclusion

Through the completion of this program evaluation, practical, meaningful, and useful data will help support future supported employment program designs to enhance outcomes for all individuals with a TBI pursuing careers in any field they choose. This evaluation design will also lead to ongoing design changes for any necessary adaptations and adjustments to variable and outcome measures utilized within the program. With continuous data collection, this quasi-experimental approach to program evaluation will lend itself easily to the exploration of additional evaluation endeavors that will support additional supported employment programs based on meaningful occupations.

In conclusion, evaluation of the Supported Brewing Initiative will involve program evaluation of the brewery setting as a supported employment site, effectiveness of a task checklist to improve job confidence outcomes, and examination of job skills attainment and employment success following intervention. Thorough evaluations of all aspects are crucial to ensure successful job skills training using a new supported employment environment and ability to achieve gainful employment following completion. Additionally, due to the lack of evidence for the use of a brewery as a setting for supported employment, this program evaluation will add to the existing

evidence literature for including meaningful occupations into supported employment settings.

CHAPTER FIVE – Funding Plan

<u>INTRODUCTION</u>

As more young adults enter college with increasing numbers having disabilities, future businesses must be able and willing to accept these individuals into the world of gainful employment. This reality posits the need for an increase in variety for supported employment internships spanning all manner of industries that allow each individual the opportunity to experience something meaningful to their lives and passions. The goal of the Supported Brewing Initiative is to create a unique supported employment program through an internship experience at a brewery. By exposing young adults with a history of TBI to this setting, it is hoped that they will acquire skills that will lead to improved participation in society through gainful employment. A combination of in-person, print, and electronic/online training modalities will be utilized to expand OT practice in the area of supported employment and TBI outcomes research.

<u>PROGRAM BUDGET</u>

In order to fully support and develop this program's potential, significant cost considerations must be taken. Since this is a pilot program and lacks significant backing, much of the first year's costs will be unbillable time volunteered by myself as the lead OT developing and implementing the program, educating and training mentors/brewery staff, and working with the interns individually. Once the program has a foothold with outcomes to support continued growth, there will be a significant reduction in unbillable time spent by the lead OT in order to sustain the program. Table 5.1 outlines the program budget items related to activities sponsored by the lead OT.

Table 5.1 – Program Budget Items for Lead Practitioner

Activities	Cost
Planning/Development non-billable time • Development of Onboarding Manual • Organization and operational planning of program interventions and resources • Planning meetings with Brewery managers and mentors/interns • Conduction of outcomes measurements with interviews/surveys/job skills checklists • Managing documentation/data management methods • Data analysis and writing outcome reports and publications • Networking meetings to facilitate avenues for dissemination • Attendance of CE courses/seminars/activities to expand evidence/knowledge of SE and TBI Educational/Training non-billable time • Instructional time for onboarding each intern/mentor/brewery staff • Data collection and analysis of surveys/job interviews as part of evaluation plan Clinical mentorship and assessment non-billable time • 1:1 mentorship of interns and tracking progress • Job skills retention and confidence check-off assessment and administration Administrative time/dissemination efforts • In-services/presentations to administrators/brewery managers/stakeholders • Management of all staff and collaborative efforts with brewery	$50/hr
Dissemination Activities • Non-billable time to write reports, publication manuscripts, research/IRB proposals, memos/dissemination reports • Presentation at local, regional, and national professional conferences and brewery events	

Additional costs will need to be considered in the program budget as outlined in Table 5.2.

Table 5.2 – Program Budget Items for Other Personnel

Personnel	Activities	Cost
Interns	Reimbursed time • 1:1 clinical mentorship/shadow • Hours clocked working each day (roughly 30-40 hours each week)	**$15/hr per intern**
Volunteers	Obtaining, organizing, and managing program equipment, storage, and resources as directed by lead OT	**$0/hr**

PROGRAM EXPENSES

In addition to the above budgeted items, there are several significant start-up costs associated with implementation of the Supported Brewing Initiative. Several assumptions have been made in deciding the total expenses with contingencies in place for unseen costs that may occur during the initial phases of this program. To start, funds will need to be allocated for general office supplies and initial printing and collection of supplies for the onboarding manuals for each individual involved with the internship. Further costs needed to cover all print, electronic, and in-person training materials will be added as well. It will be assumed that the participating brewery will volunteer space at their brewery for the interns to work, as well as provide access to their wireless Internet service, office equipment when needed, and other resources in an effort to diminish overhead costs. The most significant cost of this program will be in compensation for each intern's salary during the duration of the internship plus the cost of supplying each member with an onboarding manual. Table 5.3 outlines these costs in more detail.

Table 5.3 – Program Expense Items

Expense Item	Description/Cost
Assessment Materials/Supplies	• **Job Confidence Questionnaire** - $0; created by lead OT based on career surveys • **Job Interview Checklist** - $0; free download • **Work Retention Survey** – $0; generated on Survey Monkey and emailed to participants at 6- and 12-months post-intervention
Intervention Materials/Supplies	• $0.11/page for printed Task Checklists (cost per page ~$0.11) • Clipboard $12.95/6-pack, reusable
Onboarding Manuals	• $5.09/bound manual for each intern, lead OT, and brewery manager
Print Resources	$0.11/page printed $17.99/6-pack binder for printed materials

OVERALL BUDGET

Combined, the personnel costs and materials expenses for this program will be the primary items taken into consideration when budgeting for this program. Tables 5.4 and 5.5 provide the initial program budget estimate.

Table 5.4 – Initial Program Budget Estimate – Personnel Costs

Budget Item	Cost Summary	Program Year 1	Program Year 2
Personnel Costs			
Lead OT	~$50/hour non-billable time	(6 hours/wk x 52 weeks) x $50/hr = **$15,600**	(12 hours/wk x 52 weeks) x $50/hr = **$31,200**
Interns	$15/hour individually	(40 hours/week x 15 weeks) x $15/hour = $9,000 x 6 interns = $54,000 x 3 internship cycles/year = **$162,000**	(40 hours/week x 15 weeks) x $15/hour = $9,000 x 12 interns = $108,000 x 3 internship cycles/year = **$324,000**
Volunteers	$0	**$0**	**$0**

Table 5.5 – Initial Program Budget Estimate – Expenses

Program Expenses			
Assessment Materials/ Supplies	Varies	*Initial startup-creation/printing of all assessments* ($0.11/page printed x 2 assessments x 30 copies) = $6.6 x 3 internship cycles/year = **$19.8**	***Program Sustainability*** Cost of printed assessment pages ($6.6) x 2 simultaneous internships x 3 internship cycles/year = **$39.6**
Intervention Materials/ Supplies	Varies	(Clipboards per intern @ $12.95/6-pack) = **$12.95**	(Printed Checklists $0.11/page x 15 copies x 12 interns) + (Clipboards per intern @ $12.95/6-pack) = **$32.75**
Onboarding Manuals	$5.09/ manual	[$5.09/manual x (6 interns + 1 Lead OT + 1 Brewery Manager) x 3 internship cycles/year] = **$106.89**	[$5.09/manual x (12 interns + 2 Lead OTs + 2 Brewery Managers) x 3 internship cycles/year = **$244.32**
Print Resources	$0.11/ page $17.99/6 pack Binders	$0.11/page x 100-200 pages = $11 - $22 $17.99/6 pack binders x 1 group = **$17.99**	$0.11/page x 50-100 pages = $5.5 - $11 $17.99/6-pack binders x 2 groups = **$35.98**
TOTAL BUDGET		$177,767.53	$355,552.65

POTENTIAL FUNDING SOURCES

With the majority of costs involved in the implementation of this program
stemming from non-billable volunteer time by myself as the lead OT plus the total cost of
each intern's salary, initial funding of the internship will depend on access to and
acquisition of grants (federal, state, and local) as well as petitioning local resources
(organizations and private funding) for additional support. This primary funding will
likely come from USDOE grants focused on establishing and promoting successful
supported employment for young adults across the country. Outside sources (such as
crowdsourcing and private funding) will help to offset the remaining costs associated
with program implementation and development. These sources are outlined in Table 5.6.

Table 5.6 – Internal and External Funding Sources

Funding Source	Description
Government Funded Grants	Research, program and intervention development, and needs-based grants and funding sources related to supported employment and TBI, - available through government agencies including NIH, NCI, HRSA, NCIHD, and USDOE. http://www.grants.gov
AOTF	Scholarships and grants for efforts to advance OT practice http://www.aotf.org/scholarshipsgrants
Foundation Center services	Interactive database for funding/grant opportunities and resources http://foundationcenter.org/find-us
Crowdsourcing	Use of new crowdsourcing websites allows significant opportunity for funding while reducing overall expenses without need for a RTI https://www.gofundme.com/
Kessler Foundation	Foundation devoted to supporting and promoting positive change for people with disabilities, offers signature employment grants for non-traditional solutions to increase employment outcomes https://kesslerfoundation.org/grantprograms/signatureemploymentgrants.php

SUMMARY AND CONCLUSION

The primary costs to implement the Supported Brewing Initiative during the first two years are non-billable personnel costs (mostly from myself), with the addition of salaries for each intern and start-up funds for initial assessments and onboarding manuals. While the personnel costs are high, the volunteered time and space afforded by the participating brewery and potential increase in profitability for all associated parties through collaboration lowers the overall cost of the program. Due to the non-profit nature of this internship program, the success of the internship relies almost solely on grants and other funding sources. While this complicates the overall budgeting and cost-margins for this venture, there are significant numbers of funding sources devoted to the development of internship programs such as these to promote gainful social participation for all people with and without disabilities in an effort to bolster the nation's economy.

CHAPTER SIX – Dissemination Plan

<u>INTRODUCTION</u>

Since this program is a pilot study in nature, the first two years of implementation

will be the most crucial in gathering evidence and outcomes to distribute as part of the

dissemination plan for continued support. The Supported Brewing Initiative is a pilot

internship program designed to allow young adults recently graduated from four-year

universities and have suffered a TBI the opportunity to build job skills and experience for

a foundation in a competitive market for becoming gainful participants in society. The

unique brewery setting offers an unprecedented chance to expand career opportunities

and focus on a meaningful occupation for promoting greater inclusion in a fast-growing

industry. In order to further the field of supported employment and advance OT's

participation in SE, the years following the initial collection of data will focus on

dissemination of results and acquired knowledge to influence practitioners, influential

stakeholders, government policies and procedures, and organizations nationwide to

increase the prevalence and availability of supported employment opportunities in unique

and meaningful industries.   This chapter will explain in detail the proposed plan for

dissemination of the results of this program implementation.

<u>GOALS AND OBJECTIVES OF THIS DISSEMINATION PLAN</u>

Following implementation of the proposed pilot internship program, ongoing

consideration will be given to the dissemination of the outcomes and information gained

to share knowledge and expand OT practice and awareness of SE policies around the

nation. The goals and objectives of this plan are outlines in Table 6.1.

Table 6.1 – Long-term goal and short-term objectives

Long-term Goal	The Support Brewing Initiative Pilot Internship will promote the unique role of OT in providing meaningful and gainful opportunities for people with TBIs to gain job experience for gainful participation in society while reducing stigma and bias associated with the condition.
Short-Term Objectives	Within 1-3 years of program implementation, the lead OT will have presented outcome results to at least 3 national and state conferences
	Within 2-5 years of program implementation, the lead OT will have founded programs at 5 craft breweries

KEY MESSAGES AND TARGET AUDIENCE

The primary target audience for this dissemination plan is US OT practitioners interested in program development and supported employment research. With the development of a unique setting and implementation of strategies to assist in supporting young adults with TBI gain job skills to promote successful future careers, it is essential that the knowledge gained from this type of program be available across the nation in order to expand both the scope of supported employment opportunities and OT's role in the supported employment process. This program's success highlights the need for OT's to provide their clinical knowledge, advocacy for client's meaningful occupations, and evidence-based practice to play a part in all supported employment endeavors and the ongoing collaboration with new and exciting industries. Second, this dissemination plan targets those federal and local government bodies as well as organizations in charge of overseeing the implementation of all supported employment endeavors. It is crucial to supply these organizations and governments with objective data and outcomes

demonstrating the inherent benefit to be gained from promoting choice and excitement in

desired activities and industries for improving employment outcomes across the U.S. A

third audience is sought for this dissemination plan – the individuals who feel

pigeonholed, bias for their conditions, or prejudice against their abilities to participate in

the same opportunities afforded their peers. For each of the targeted audiences, directed

key messages regarding the results of this doctoral project will be conveyed to engage

these groups in ongoing efforts to expand OT practice in the area of supported

employment initiatives. Table 6.2 lists the key messages for each targeted audience.

Table 6.2 – Key messages for the target audiences

Message	Target Audience
Young adults who have suffered a TBI can learn and adapt scenarios to be successful in any career they choose to pursue.	Secondary – Businesses Tertiary
Current participating supported employment industries do not provide the depth and breadth of opportunities for promoting passion and creativity in the nation's graduating youth.	Primary – Occupational Therapy Practitioners
OT has a meaningful impact on supported employment program development and implementation for increasing opportunities for participation in desired activities and occupations	Secondary – Government and organizations Tertiary – Students with disabilities and families/caregivers
Supported employment organizations and policies need to include OT practitioners in SE program implementation as essential partners in the success of the participating individuals.	Primary - AOTA Secondary – Government and state TBI organizations

In order to effectively communicate these key messages to the targeted audiences,

reputable and influential messengers will need to be employed to engage the target

audiences. The identified messengers and why they have been chosen as credible

spokespersons for sharing the key messages of this program are described in Table 6.3-

6.5.

Table 6.3 – Spokespersons to spread the key messages – Primary Audience

Primary Audience	Messengers	Rationale	Key Messages
OT Practitioners Across the US	Lead OT	The lead OT of the Supported Brewing Initiative can and will serve as the expert clinician in the area of meaningful supported employment development. As such, the lead OT can serve as the most effective promoter of the program and speak professionally and clinically to the needs of the target population and the services and outcomes the program can offer in order to most effectively translate knowledge to practitioners in a variety of geographic and practice settings in order to empower practitioners to expand their skills and services to include supported employment development and expansion for young adults with disabilities.	2, 3, 4
	American Occupational Therapy Association (AOTA)	As the leading professional organization in the U.S. for OT practitioners, AOTA has an influential and powerful impact on the implementation of evidence-based interventions for OT practice and dissemination of practice guidelines, educational materials, and professional development activities in all areas of OT practice. In collaboration with the lead practitioner, AOTA will be able to provide a broader stage for dissemination of the Supported Brewing Initiative and can be a champion for establishing OT as a routine partner in all supported employment initiatives and hopefully the main developer for new supported employment initiatives in unique and meaningful industries.	

Table 6.4 – Spokespersons to Spread Key Messages – Secondary Audience

Primary Audience	Messengers	Rationale	Key Messages
Businesses, Organizations, and Government Agencies/Policy Makers	Lead OT	The lead OT of the Supported Brewing Initiative can and will serve as the expert clinician in the area of meaningful supported employment development. As such, the lead OT can serve as the most effective promoter of the program and speak professionally and clinically to the need for meaningful opportunities for successful supported employment programs to reduce stigma and improve job retention outcomes for individuals with TBIs graduating from universities all over the country. This information will also serve to adapt policies to allow greater funds and grants for supporting these initiatives as well as advocating for OT's role in SE practice.	1, 2, 3, 4
	Participants' Families	For effective policy change and personal accounts on the effectiveness of a unique, meaningful opportunity for a supported employment internship, the participant's families will offer their subjective insight to the success of the program. Their unique views on how the program afforded opportunities and success in their family member's lives can have a powerful impact on how policies are changed by the family's local representatives, as well as how local businesses and organizations view people with TBIs.	

Table 6.5 – Spokespersons to Spread Key Messages – Tertiary Audience

Primary Audience	Messengers	Rationale	Key Messages
OT Practitioners Across the US	Lead OT	The lead OT of the Supported Brewing Initiative can and will serve as the expert clinician in the area of meaningful supported employment development. As such, the lead OT can serve as the most effective promoter of the program and speak professionally and clinically to each student and family as to the implications of such an initiative to promote greater inclusion and success in each student's ability to participate in gainful participation following graduation.	1 & 2
	University Office of Disability Services	Each university is required to have this office for assisting those individuals who may need extra assistance in order to fully participate in all courses, extracurriculars, and general daily living around campus. This office's ability to reach all eligible participants and offer access to on-campus information boards and event coordinators can help champion the messages promising assistance to achieving successful gainful employment following graduation.	

DISSEMINATION ACTIVITIES, MECHANISMS FOR DISSEMINATION AND BUDGET

In order to reach each of the desired target audiences of this plan, several tasks must be completed to translate the outcomes and knowledge into information digestible by each audience. These activities will include person-to-person contact activities (conference presentations, collaborative program planning, educational presentations, etc.), written information (educational brochures, written dissemination articles, etc.) and electronic media (social media posts, electronic organizational reports, etc.). These activities will be executed over the span of approximately 4-5 years following program

implementation, with the initial priority target audience being fellow OT practitioners for feedback prior to expanding to include higher profile audiences. A breakdown of the proposed activities, timeline, and cost of each activity and personnel that will be responsible for executing each task are listed in Tables 6.6 and 6.7.

Table 6.6 – Dissemination Activities – Person-to-Person Contact

Activity	Target Audience	Timeline	Responsible Party	Cost
Professional Conference presentations (i.e. AOTA)	Primary	Year 1+	Lead practitioner with support from brewery managers	~$1000/conference (*registration, travel, presentation costs*)
Collaborative planning meetings and in-services with brewery managers and families	Tertiary	Year 1+	Lead practitioner Participating Brewery Managers	Cost of non-billable wages of involved parties
Educational presentation to new potential brewery partnerships, TBI organizations, and local government officials	Secondary Tertiary	Year 1-2	Lead OT Participating Brewery Managers Participants & Families	Cost of non-billable wages of involved parties Volunteer time
Guest lectures and in-service presentations at local, regional, and national OT practitioner educational programs and associated Offices of Disability Services	Primary	Year 2-5	Lead OT	Cost of non-billable wages Travel expenses (*varies*)

Table 6.7 – Dissemination Activities – Written Information and Electronic Media

Written Information				
Professional reports and articles submitted to reputable OT practice sources (i.e. AOTA, OT Practice, etc.)	Primary	Year 2-5	Lead practitioner with support from brewery managers	Cost of non-billable wages of involved parties
Educational brochure on Supported Brewing Initiative	Secondary Tertiary	Year 1-2	Lead practitioner Participating Brewery Managers Participants & Families	Cost of non-billable wages of involved parties Volunteer time Cost of printed materials ($0.11/pg.)
Electronic Media				
Memos, briefs, and outcomes reports distributed to participating brewery managers, participants, and families	Secondary Tertiary	Year 1-2	Lead OT	Cost of non-billable wages
Social Media Outlets	Primary Secondary Tertiary	Year 1+	Lead practitioner Participating Brewery Managers Participants & Families	Cost of non-billable wages

The implementation of this dissemination plan will rely heavily on expert and trained personnel time, thus the majority of the budget to execute this plan will be largely to cover the non-billable/non-reimbursable time of the team members, plus the volunteer time. A breakdown of the anticipated budget over the expected five-year dissemination

period is in Table 6.8.

Table 6.8 – Preliminary budget for dissemination activities

Dissemination Activities	Expenses	Activity Budget
Professional Conference presentations	$1000/conference	$1000 x 2 conferences/year x 5 years = **$10,000**
Collaborative planning meetings and educational presentations	Non-billable wages • Lead OT = $50/hour • Participating Brewery Managers = $30/hour	($50 x 6 hours/month) + ($30 x 3 hours/month) = $390/month x 12 months = $4680 x 2-4 years = **$9,360 - $18,720**
Guest Lecturing	Non-billable wages of Lead OT = $50/hour	$50/hour x 3 hours per quarter x 4 quarters = $600/year x 3 years = **$1800**
Written dissemination materials	Non-billable wages • Lead OT = $50/hour • Participating Brewery Managers = $30/hour • Participants and Families = $0/hour (Volunteer) Cost of printing materials = $0.11/pg	($50/hour x 3 hours/month) + ($30/hour x 0.5 hours/month) + ($0/hour x 1 hour/month) = $165/month x 12 months = $1980 x 3 years = $5940 $0.11/page x 500 pages/year = $55 x 3 years = $165 $5940 + $165 = **$6,105**
Development of electronic media reports and dissemination materials	Non-billable wages • Lead OT = $50/hour • Participating Brewery Managers = $30/hour • Participants and Families = $0/hour (Volunteer)	($50/hour x 10 hours/internship) + ($30/hour x 2 hours/ internship) + ($0/hour x 2 hours/ internship) = $560 x 3 internships = $1680 x 3 years = **$5,040**
Total Budget		**$10,995/year x 5 years = $54,975**

<u>EVALUATION PLAN</u>

The dissemination of the information acquired throughout the duration of the Supported Brewing Initiative pilot program aims to influence how supported employment practices are developed and implemented in growing types of industries through inter-organizational knowledge sharing, OT training, and infusion of practice recommendations into current and future supported employment legislation and policy making. Thus, in order to ensure effectiveness and success of this plan, two factors must be considered: the type and volume of written information added to the current practice evidence, and the impact this information has on generating change within the OT supported employment community. Measurement criteria for evaluation of this plan will be as follows:

Evaluation Criteria – Contribution to current evidence base

- The lead OT will give professional presentations on the use of meaningful occupations to design a supported employment program at relevant professional conferences at least two times over five years (dissemination plan period)

- The lead OT will provide in-services and/or guest lectures on meaningful supported employment to at least three OT educational programs within five years

- Within five years of implementation, the Supported Brewing Initiative will publish at least three reports, memos, articles, and/or studies with professional OT publications and/or peer-reviewed journal articles

Evaluation Criteria – Supported Brewing Initiative Outcomes

- Through person-to-person contact activities, written and electronic dissemination efforts, and social media success stories, the Supported Brewing Initiative will be established in

at least three different brewery organizations with an increased referrals of 10-15%

within five years (dissemination plan period)

CONCLUSION

The long-term objective of the Supported Brewing Initiative's dissemination plan

is to promote the unique role of OT in providing meaningful and gainful opportunities for

people with TBIs to gain job experience for gainful participation in society while

reducing stigma and bias associated with the condition. In order to achieve this goal,

several steps must be taken to ensure that the knowledge gained during the pilot program

is translated into meaningful and digestible information for other OT practitioners,

potential brewery partnerships, federal and state legislators, and organizations. Through

efforts to disseminate this knowledge at professional conferences, networking, and

educational events, in collaboration with brewery managers and participants and their

families, the Supported Brewing Initiative will aim to expand OT practice and facilitate

the development of more meaningful supported employment for young adults with TBIs

around the U.S.

CHAPTER SEVEN – Conclusion

Each day, more children, young adults, and veterans suffer injuries resulting in a traumatic brain injury (TBI) and a large majority of these individuals are either entering or already participating in two- and four-year degrees from colleges and universities (CDC, 2018; Defense and Veterans Brain Injury Center, 2015; Graham, et al, 2016). A TBI can cause copious challenges and barriers to successful transitions from education to gainful employment, coupled with the already existing challenges created by contemporary social, political, and economic climates (Bowman, Borlagdan, & Bond, 2015). Narrative accounts from students pursuing two- and four-year degrees highlight those challenges, as well as the lack of support available and significantly decreased motivation to continue working (Cahill, et al., 2014; Artman & McMahon, 2013; Matérne et al., 2017; American Heroes At Work, 2018). While there are supports in place to assist with completing higher education for these students with TBI, such as Project Career, there remains a gap in the evidence literature describe transitional supported programs for individuals with TBI seeking gainful employment following graduation.

The Supported Brewing Initiative is a pilot supported employment internship program designed to fill the transitional gap from graduation to successful employment for young adults and veterans with TBI. The evidence literature supports the use of supported employment (SE) programs to achieve successful careers (Bowman et al., 2015; Goodwill, 2018; BARC, 2018). The use of ongoing supports before, during, and after enrollment in a SE program provides the tools necessary to facilitate a successful return to work, or facilitate a successful role change following injury and disability

(Graham, et al., 2016; Malec & Moessner, 2005; Wehman, et al., 2000). However, while the Supported Brewing Initiative is founded in well-documented SE literature, the unique use of a brewery setting has little to no support in the evidence literature. The craft beer industry is an untapped market for SE and is one of the fastest growing industries in the world (Watson & Herz, 2018; Brewers Association, 2018). Thus, this program seeks to demonstrate the effectiveness of a brewery setting as a SE program environment and facilitate success in the transition from education to gainful employment.
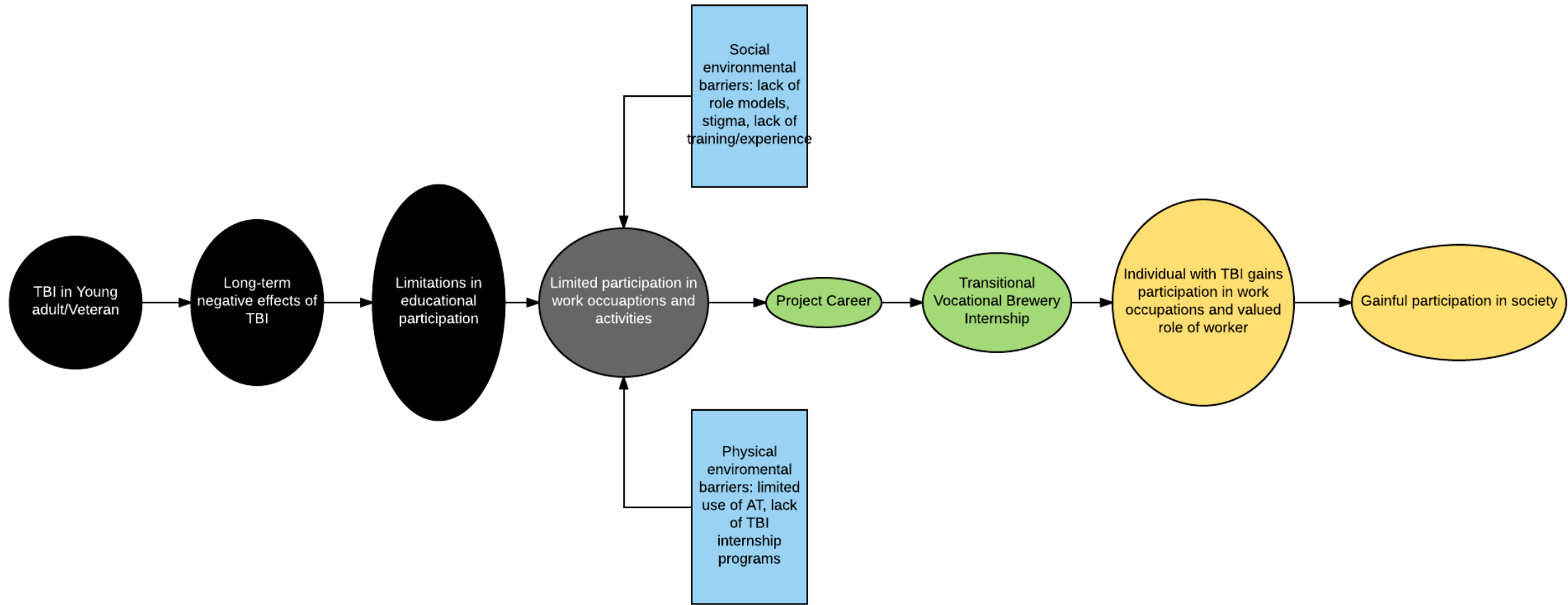
Through design and implementation of the Supported Brewing Initiative, this pilot program will expand the scope of occupational therapy (OT) practice nationwide. OT practitioners' abilities in task analysis and focus on client-entered, evidence-based, and occupation-based interventions further advocates for OT involvement in design, implementation, and dissemination of meaningful SE programs. The evaluation of this program's success and through dissemination of the results will influence rehabilitation science and OT practice, as well as facilitate knowledge translation to practitioners nationwide.

While the advocacy and expansion of current OT practice is an important feature of this program, the ultimate goal of the Supported Brewing Initiative is to facilitate improved employment skills, confidence, and abilities in students with TBI as they seek meaningful careers post-college. It is the purpose of this program to facilitate these outcomes through (1) direct, context-based, meaningful experience working in a brewery setting; (2) ongoing support and peer-mentoring to translate experiences and ideas to gainful employment opportunities; and (3) increasing employment opportunities for

young adults and veterans with TBI following graduation. By addressing the service gap for transitions from education to gainful employment, this pilot program will enable OT practitioners to effect positive changes in these student's lives and well-being by better addressing their unique needs and career desires.
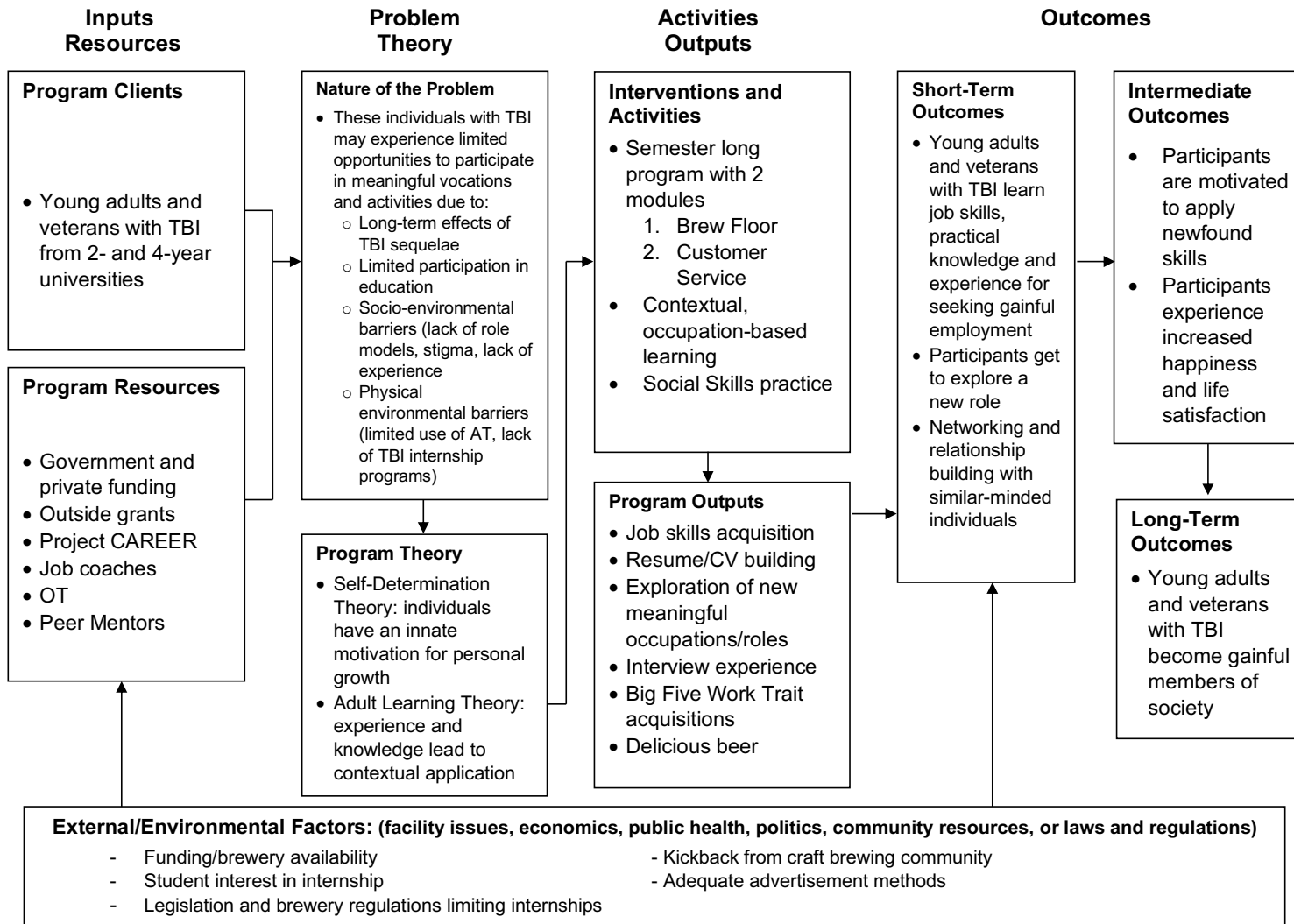
Broadly, the Supported Brewing Initiative is a pilot SE program aimed at improving opportunities at gainful employment for graduating students with TBI. With a growing incidence of TBI in children, young adults, and veterans, it is imperative that OTs stay informed on best practice recommendations for supporting these students in their life transitions. Through ongoing support, direct job training, and provision of skills acquisition, this program has the potential to greatly impact employment outcomes, boost the available workforce, and improve self-confidence and motivation in young adults with disabilities. This program will determine the effectiveness of meaningful, context-based interventions in employment in order to advance OT practice and rehabilitation science as a whole.

APPENDIX A - Explanatory Model of the Clinical Service Gap

APPENDIX B - Logic Model

Supported Brewing Initiative Logic Model

Inputs Resources	Problem Theory	Activities Outputs	Outcomes	

Program Clients

- Young adults and veterans with TBI from 2- and 4-year universities

Program Resources

- Government and private funding
- Outside grants
- Project CAREER
- Job coaches
- OT
- Peer Mentors

Nature of the Problem

- These individuals with TBI may experience limited opportunities to participate in meaningful vocations and activities due to:
  - Long-term effects of TBI sequelae
  - Limited participation in education
  - Socio-environmental barriers (lack of role models, stigma, lack of experience
  - Physical environmental barriers (limited use of AT, lack of TBI internship programs)

Program Theory

- Self-Determination Theory: individuals have an innate motivation for personal growth
- Adult Learning Theory: experience and knowledge lead to contextual application

Interventions and Activities

- Semester long program with 2 modules
  1. Brew Floor
  2. Customer Service
- Contextual, occupation-based learning
- Social Skills practice

Program Outputs

- Job skills acquisition
- Resume/CV building
- Exploration of new meaningful occupations/roles
- Interview experience
- Big Five Work Trait acquisitions
- Delicious beer

Short-Term Outcomes

- Young adults and veterans with TBI learn job skills, practical knowledge and experience for seeking gainful employment
- Participants get to explore a new role
- Networking and relationship building with similar-minded individuals

Intermediate Outcomes

- Participants are motivated to apply newfound skills
- Participants experience increased happiness and life satisfaction

Long-Term Outcomes

- Young adults and veterans with TBI become gainful members of society

External/Environmental Factors: (facility issues, economics, public health, politics, community resources, or laws and regulations)

- Funding/brewery availability
- Student interest in internship
- Legislation and brewery regulations limiting internships
- Kickback from craft brewing community
- Adequate advertisement methods

APPENDIX C - Recruitment Flyer

Supported Brewing Initiative

A Pilot Supported Employment Internship Program

Concerned about the school-to-work transition?

This is an opportunity to gain job skills and experience to ease the transition
from school to work for participants in Project Career

Please email krminner@gmail.com for more

information

Boston University | **2018**

APPENDIX D - Big Five Inventory

Introduction

This is a personality test, it will help you understand why you act the way that you do and how your personality is structured. Please follow the instructions below, scoring and results are on the next page.

Instructions

In the table below, for each statement 1-50 mark how much you agree with on the scale 1-5, where 1=disagree, 2=slightly disagree, 3=neutral, 4=slightly agree and 5=agree, in the box to the left of it.

Test

| Rating	I....	Rating	I.....
	1. Am the life of the party.		26. Have little to say.
	2. Feel little concern for others.		27. Have a soft heart.
	3. Am always prepared.		28. Often forget to put things back in their proper place.
	4. Get stressed out easily.		29. Get upset easily.
	5. Have a rich vocabulary.		30. Do not have a good imagination.
	6. Don't talk a lot.		31. Talk to a lot of different people at parties.
	7. Am interested in people.		32. Am not really interested in others.
	8. Leave my belongings around.		33. Like order.
	9. Am relaxed most of the time.		34. Change my mood a lot.
	10. Have difficulty understanding abstract ideas.		35. Am quick to understand things.
	11. Feel comfortable around people.		36. Don't like to draw attention to myself.
	12. Insult people.		37. Take time out for others.
	13. Pay attention to details.		38. Shirk my duties.
	14. Worry about things.		39. Have frequent mood swings.
	15. Have a vivid imagination.		40. Use difficult words.
	16. Keep in the background.		41. Don't mind being the center of attention.
	17. Sympathize with others' feelings.		42. Feel others' emotions.
	18. Make a mess of things.		43. Follow a schedule.
	19. Seldom feel blue.		44. Get irritated easily.
	20. Am not interested in abstract ideas.		45. Spend time reflecting on things.
	21. Start conversations.		46. Am quiet around strangers.
	22. Am not interested in other people's problems.		47. Make people feel at ease.
	23. Get chores done right away.		48. Am exacting in my work.
	24. Am easily disturbed.		49. Often feel blue.
	25. Have excellent ideas.		50. Am full of ideas.

$E = 20 +$ (1) ____ $-$ (6) ____ $+$ (11) ____ $-$ (16) ____ $+$ (21) ____ $-$ (26) ____ $+$ (31) ____ $-$ (36) ____ $+$ (41) ____ $-$ (46) ____ $=$ ____

$A = 14 -$ (2) ____ $+$ (7) ____ $-$ (12) ____ $+$ (17) ____ $-$ (22) ____ $+$ (27) ____ $-$ (32) ____ $+$ (37) ____ $+$ (42) ____ $+$ (47) ____ $=$ ____

$C = 14 +$ (3) ____ $-$ (8) ____ $+$ (13) ____ $-$ (18) ____ $+$ (23) ____ $-$ (28) ____ $+$ (33) ____ $-$ (38) ____ $+$ (43) ____ $+$ (48) ____ $=$ ____

$N = 38 -$ (4) ____ $+$ (9) ____ $-$ (14) ____ $+$ (19) ____ $-$ (24) ____ $-$ (29) ____ $-$ (34) ____ $-$ (39) ____ $-$ (44) ____ $-$ (49) ____ $=$ ____

$O = 8 +$ (5) ____ $-$ (10) ____ $+$ (15) ____ $-$ (20) ____ $+$ (25) ____ $-$ (30) ____ $+$ (35) ____ $+$ (40) ____ $+$ (45) ____ $+$ (50) ____ $=$ ____

The scores you calculate should be between zero and forty. Below is a description of each trait.

- **Extroversion (E)** is the personality trait of seeking fulfillment from sources outside the self or in community. High scorers tend to be very social while low scorers prefer to work on their projects alone.
- **Agreeableness (A)** reflects much individuals adjust their behavior to suit others. High scorers are typically polite and like people. Low scorers tend to 'tell it like it is'.
- **Conscientiousness (C)** is the personality trait of being honest and hardworking. High scorers tend to follow rules and prefer clean homes. Low scorers may be messy and cheat others.
- **Neuroticism (N)** is the personality trait of being emotional.
- **Openness to Experience (O)** is the personality trait of seeking new experience and intellectual pursuits. High scores may day dream a lot. Low scorers may be very down to earth.

Below is a graph of how other people scored when test was offered on the internet.
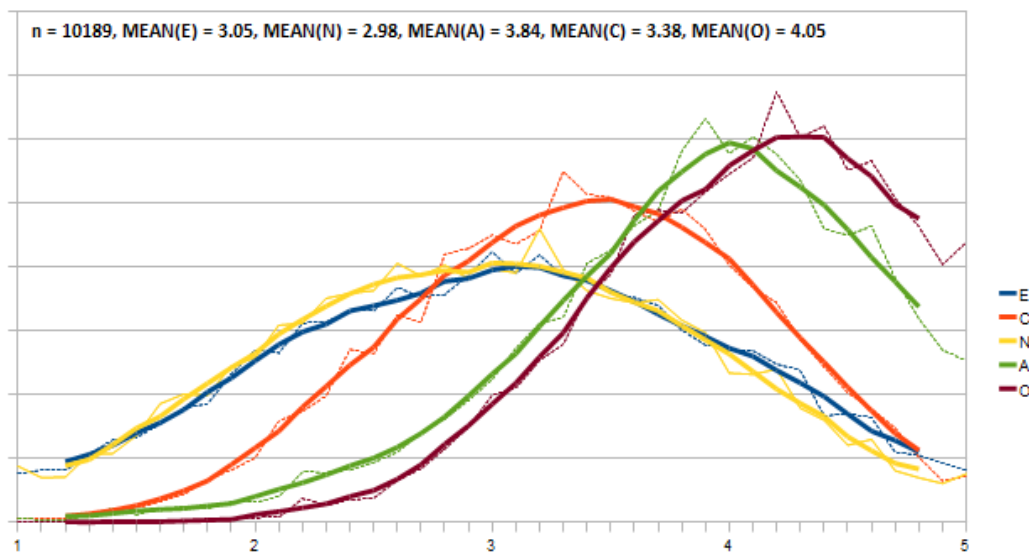
APPENDIX E – Job Confidence Questionnaire

The following questions ask about how confident you feel in performing job tasks and comfort in a work environment. Please circle the best answer for you. How confident have you felt in the following situations?

1. Performing tasks give by your boss/teacher/parent?

1	2	3	4	5
Not at all	A Little	Somewhat	More than normal	Extremely

2. Working with others?

1	2	3	4	5
Not at all	A Little	Somewhat	More than normal	Extremely

3. Completing tasks in a timely manner?

1	2	3	4	5
Not at all	A Little	Somewhat	More than normal	Extremely

4. Working independently?

1	2	3	4	5
Not at all	A Little	Somewhat	More than normal	Extremely

5. Handling high stress situations?

1	2	3	4	5
Not at all	A Little	Somewhat	More than normal	Extremely

6. Do you feel that this program is helping you improve your confidence?

7. How would you improve this program

APPENDIX F – Modified Job Interview Scale

Regent University
Student Services
Center for Student Development

Mock Interview Rating Scale

Candidate Name: _____ Interviewer: _____ Date: _____

Item 1 - First Impressions: First 10 Seconds

	Key: 5=Excellent	3=Average	1=Poor
ATTIRE	• Suit and tie, polished shoes, no open toes, no loud prints, conservative hem length.	• Neat/Appropriate	• Sloppy/Inappropriate • Wrinkled
GROOMING	• Exceptional - minimal jewelry, no distracting fragrances, clean, hair tidy and of natural color.	• Neat/Appropriate	• Sloppy/Inappropriate
COMMUNICATION STYLE	• Pleasant/Logical • Persuasive • Organized thoughts		• Unpleasant/Indistinct • Responses long and off-track • Disorganized thoughts
ATTENTIVENESS	• Very bright	• Aware	• Distracted
PRESENTATION	• Very self-confident/poised • Relaxed		• Very uncomfortable • Overly formal, stilted
Comments:			

Item 2 – First Impressions: Introduction/Small Talk

☐ Addressed interviewers by name. ☐ Provided your own name. ☐ Included a statement of gratitude.

	Key: 5=Excellent	3=Average	1=Poor
SMALL TALK	• Initiated small talk, if situation allowed. • Responded to small talk easily (more than a short answer). • Established rapport.	•Small talk was hesitant	• Allowed an awkward pause •Too short/too long response •No rapport established.
ATTITUDE/ DEMEANOR	• Enthusiastic without taking over interview. •Friendly, but job-focused. •Respectful	•Friendly, but lost job-focus.	• Pushy or reticent. •Entirely job-focused. •Arrogant
NONVERBAL	• Firm handshake. • Good eye contact.		• Limp handshake. • Often failed to maintain eye contact
Comments:			

Item 3 – General Communication Style

	Key: 5=Excellent	3=Average	1=Poor
☐ No cell phone interruptions.			
PACE	• Conversational		• Awkward gaps
INTERRUPTING	• Never	• Once or twice	• Frequently
CONCISENESS	• Concise		• Too long or short
USE OF PAUSES	• Effective		• Ineffective
Comments:			

Regent University
Student Services
Center for Student Development

Item 4- Body Language

Key: 5=Excellent 3=Average 1=Poor	5	4	3	2	1
EYE CONTACT					
FACIAL EXPRESSION					
POSTURE					
BODY LANGUAGE/USE OF SPACE					
TONE OF VOICE					
SELF-CONFIDENCE					
USE OF MIRRORING					
Comments:					

Item 5 – Tell me about yourself.

☐ Mentioned strengths.
☐ Related strengths to job.
☐ Fluent, ready response.
☐ Created solely positive, professional impression.
☐ Personal information demonstrated desirability as employee.

Comments:

Item 6 – Why are you interested in working here?

* Emphasize the need to research a company well before the interview.

Key: 5=Excellent	3=Average	1=Poor
EMPLOYEE "FIT"	• Cites job description. • Cites personal strengths related to job description.	• Emphasizes personal preferences like benefits, convenient locale, etc. • Sounds desperate.
Comments:		

Item 7 – Why should we hire you?

* Emphasize the need to research a company well before the interview.

☐ Candidate seems prepared for the question.
☐ Candidate focuses solely on benefits to the company.
☐ Candidate cites the job description.
☐ Candidate cites personal strengths related to the job description.
☐ Candidate communicates unique strengths that set him/her apart from other applicants.
☐ All candidate responses are highly professional.

Comments:

Regent University
Student Services
Center for Student Development

Item 8 – What are your long-range goals?

Key: 5=Excellent	3=Average	1=Poor
• Well-thought-out response. • Demonstrates goal-orientation. • Demonstrates ability to plan ahead. • Communicates clearly how the current job fits into goals. ("Connects the dots.") • Avoids sounding as though this job would merely be a stepping-stone. • Communicates clearly how this job will utilize personal strengths.		• Uncertain response. • No evidence of clear goals. • No evidence of planning ability. • Sounds as though this job would merely be a stepping-stone. • Fails to discuss strengths.
Comments:		

Item 9 – What is your greatest strength and greatest weakness?

Key: 5=Excellent	3=Average	1=Poor
• Well-thought-out response. • Clearly articulates strength, with examples. • Weakness is related to a professional quality. • Emphasizes how weakness is being addressed. • Believable. • Demonstrates self-knowledge.		• Uncertain response. • No examples. • Weakness is a personal trait. • Claims to have no weaknesses.
Comments:		

Item 10 – What salary are you expecting?

* Emphasize the need to research pay ranges for this job before the interview.

Key: 5=Excellent	3=Average	1=Poor
• Not "thrown" by the question. • Has a well-researched response. • Assures interviewer of confidence that an acceptable salary can be negotiated if a job offer is made. • Responds by asking interviewer the salary range company has in mind.	• Hazards a guess.	• Uncomfortable response. • Uncertain response.
Comments:		

Item 11 – Behavioral Interview Questions

Key: 5=Excellent	3=Average	1=Poor
• Provided specific instances of experience. • Examples were clear and told fluently. • Examples included specific outcomes (Resources saved, lessons learned, etc.) • If sharing a story in which you didn't perform optimally, lessons learned are emphasized.		• Claimed experience without examples. • Unclear examples.
Comments:		

Regent University
Student Services
Center for Student Development

Item 12 – Quality of Responses to Other Questions

Key: 5=Excellent	3=Average	1=Poor
• "Sold vs. Told" – Provided details and specific outcomes. • Organized responses – major points followed by lesser points. • Focused on positives. • Well thought-out responses. • Believable. • Demonstrates self-knowledge.	• Made claims without examples. • Spoke negatively about other people or companies.	
Comments:		

Item 13 – Verbal Communication Skill

Key: 5=Excellent 3=Average 1=Poor	5	4	3	2	1
DICTION AND PRONUNCIATION					
SLANG/JARGON					
REPETITIVE PHRASES (*like, you know, like I said, um, yeah*)					
Comments:					

Item 14 - Questions Asked of Interviewer

☐ What attributes are needed to succeed in this position?

☐ What is it like to work for this company?

☐ How much turnover has there been in this position?/Why did my predecessor leave?

☐ What accomplishments would be your priorities for this position in the first year?

☐ (At end.) "I'm very interested in putting my abilities to use in this position. Do you have any concerns about my abilities?"

Key: 5=Excellent	3=Average	1=Poor
• Thoughtful, appropriate questions were asked	• No questions were asked • Questions were inappropriate	
Comments:		

Item15 – Closure

☐ Reaffirmed interest in the position.

☐ "Before we end, I'd like to share…" (Took initiative to communicate all desired points).

☐ Recap of strengths you'd bring to the position.

☐ Thanked the interviewer.

☐ Checked next steps for employer and decision date.

☐ Verified follow-up details: who to contact and how to contact them.

Comments:

Regent University
Student Services
Center for Student Development

Overall

Key: 5=Excellent 3=Average 1=Poor	5	4	3	2	1
Communication Style					
Self-knowledge					
Evidence of skills					
Interest in company evidenced					
Does this person seem like they'd be enjoyable to work with?					

Would you hire this person? ☐ **Yes**   ☐ **Conditionally [see below]**   ☐ **No**
State reason:

APPENDIX G – Intern Onboarding Manual

Welcome to the Supported Brewing Initiative!

You have been selected to participate in the Supported Brewing Initiative and we are so excited to have you working with us this semester. This handbook will provide you with references to assist you throughout the onboarding process. Likewise, the managers in charge of running the brewery have a similar copy to keep everyone on track. Should you have questions or comments, please do not hesitate to ask the lead OT in charge of this program.

Most of the crucial information you will gain during your first weeks at the brewery, but this manual allows you to refer to general policies and procedures as needed along the way. That way we ensure that everyone receives the same information in a fair and equitable manner. If anything changes throughout your time here, we will do our best to let you know as soon as possible.
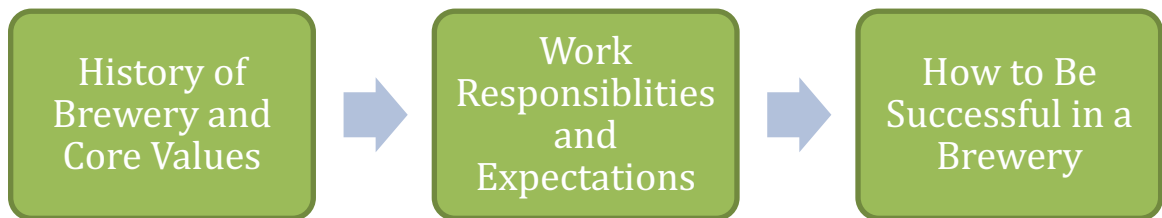
What to Expect on Your First Day

Three weeks before the program starts, you will have received this packet in the mail, along with an assortment of other documents required by the brewery to finalize your new hire status. Below is a checklist of things to expect on your first actual day at the brewery:

- Meet the lead OT

- Meet the brewery manager and staff

- A review of brewery policies and procedures

- An introduction/tour of the work environment

- Sit down with lead OT to perform baseline data collection, including a full job interview (dress nice!)

- Call and chat with your assigned peer mentor at the end of the day and set a weekly phone call

First Week

Brewery Tour

Technology Training

Module Areas

Payment Schedule
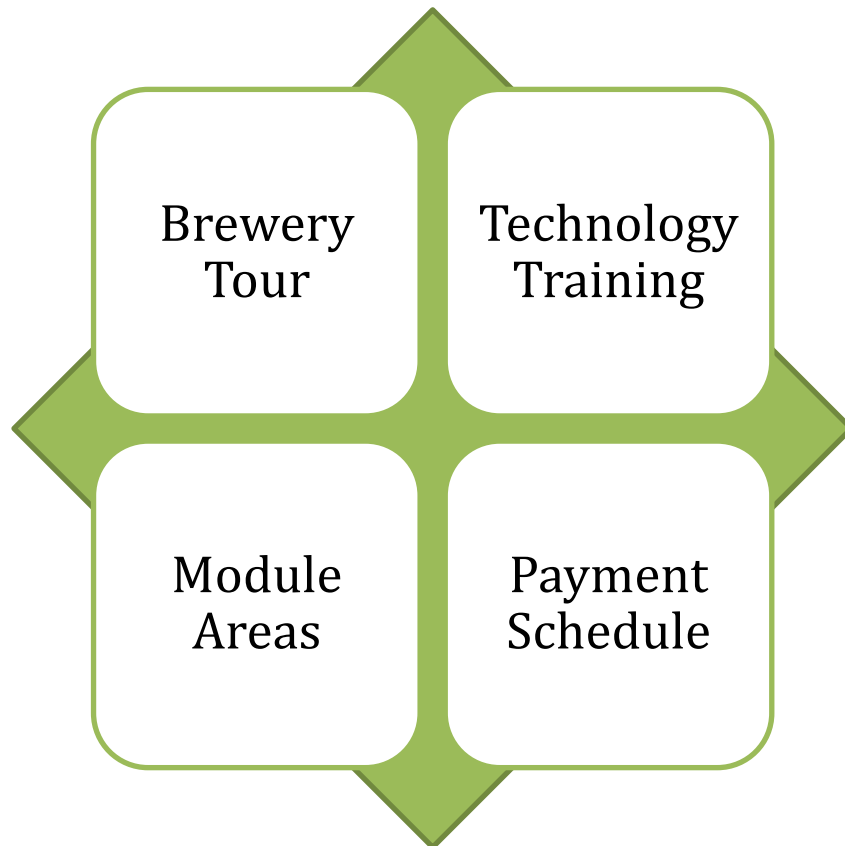
These are the tasks to be completed in the first week. The lead OT will facilitate introductions and begin the process. Please pay close attention because a large portion of this section is safety regulations of the brewery itself.

First Half

```
┌──────────────────┐      ┌──────────────────┐      ┌──────────────────┐
│   History of     │      │      Work        │      │   How to Be      │
│   Brewery and    │  ▶   │  Responsiblities │  ▶   │  Successful in a │
│   Core Values    │      │       and        │      │    Brewery       │
│                  │      │   Expectations   │      │                  │
└──────────────────┘      └──────────────────┘      └──────────────────┘
```

Throughout the first half of the program, you will be expected to learn the history of the brewery and its core values. During the actual work portion of the program, you will constantly be reviewing your responsibilities and expectations with the lead OT and brewery manager. At least one time each week, you will have a phone call with your assigned peer mentor to review progress, thoughts, feedback, concerns, etc. THIS IS VERY IMPORTANT. If you're having trouble contacting your peer mentor, please talk with the lead OT in charge of your program.

Last Half
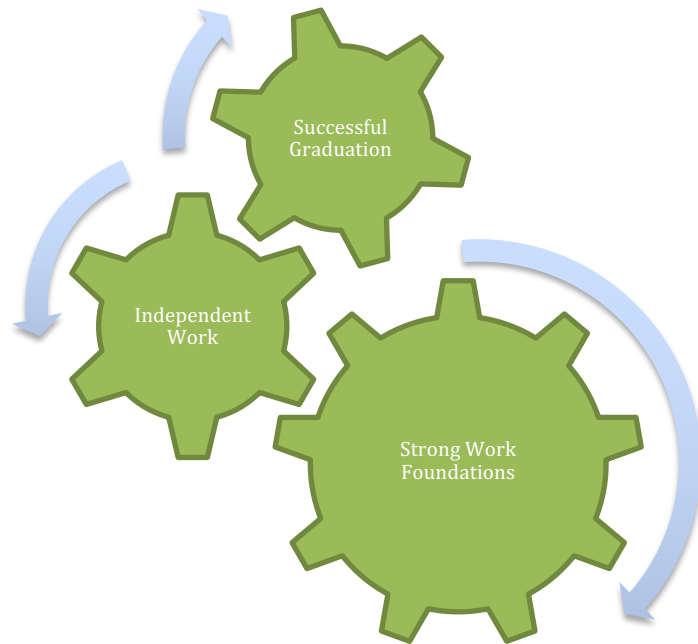
The last half of the program is where you start to feel confident in your abilities and that this experience has been meaningful and useful to your endeavors. You will still be calling in with your peer mentor at least once a week, but by now you should be working fairly independently throughout the day with less assistance needed from the brewery staff or from the lead OT. However, despite coming to a close, there will be ongoing support for you up to one year after completing this program should you need it!

First Day Agenda Worksheet

This is designed to make the first day go smoothly and address any question, and provide

HR with necessary contact information. Please fill out the information below:

Intern contact number/email:

Parking/Lunch arrangements:

Any new request/guidelines/notes/suggestions for the intern's first day:

Please forward this form to HR and lead OT when complete

APPENDIX H – OT/Brewery Manager Onboarding Manual

Welcome to the Supported Brewing Initiative!

The following pages outline the gist of the program and provide you with expected timelines for a step-by-step experience. Thanks to your generosity in supplying your brewery space for the inception of this program, we now have a responsibility to supervise and direct the interns of the Supported Brewing Initiative in such a way that they feel supported and able to take their newfound job skills into the workforce. (Or they decide to stay here and continue their quests to be a part of the best damn brewery in the world. Their choice.) Just make sure you facilitate an amazing learning environment and be the best manager possible.

Below are the pages that will help you navigate this program and lead towards success. Just follow the recipe.

Tips for the Intern's First Day

Imagine yourself and your emotional state on your first day at a "real person" job or internship. The jitters, the weird feeling in the pit of your stomach, and the sweaty palms you wipe every ten seconds on the off chance you have to shake another hand. Now I want you to imagine what that feels like when you also have difficulty with speech, or have constant headaches, or can't pay attention to anything for more than a few minutes, or even have difficulty with loud noises, bright lights, and crowded spaces. This is the environment in which these new interns find themselves. Each intern's history is unique, so be prepared to assist with any issue and be empathetic, offer comfort and camaraderie to create the best work environment. Should you run into any problems during the course of this program, please contact Kevin Minner, who is the lead OT in charge of the Supported Brewing Initiative. Some things to help out if you get stuck:

- Be clear in your expectations from the start, including offering guidelines and discussing acceptable behaviors. Especially on the brew floor. ANY UNAUTHORIZED SAMPLING OF BEER WILL RESULT IN IMMEDIATE TERMINATION FOR THE INTERN.

- No matter the task, be specific and outline the role to a "T"

- Be proactive about performance issues. The idea is to promote learning of job skills, so nip any issues in the butt

- Talk about the goals of both the internship and the brewery's involvement in this project

- Network! Take the interns on a tour and introduce them to the team. Also talk about how the customers are paramount to the brewery's success

- Bring up any past issues that you've noticed with either the management system or other interns

- Show the interns how to access training resources, and you should probably go over these resources too. Be familiar with who you both can turn to when you need advice or help in any way

- USE COMMON SENSE

You will be introduced to the interns a couple weeks prior to start date, so use that time to build rapport. Follow the checklists (you can find them a few pages from now). The lead OT will conduct all data collection and interviews but you may be asked to participate.
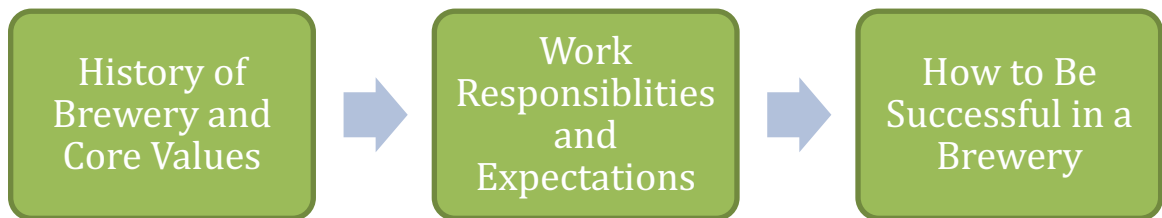
Manager's Time Frame Checklist

Follow this checklist and you should be golden:

- Set up/clean work space

- Make supplies available

- Arrange safety equipment

- Tell everyone the participant start date and the number of intern to expect

- If needed, get them some form of ID for access to necessary areas of the brewery

- Complete the intern payroll and benefits documents

First Week

Brewery Tour

Technology Training

Module Areas

Payment Schedule
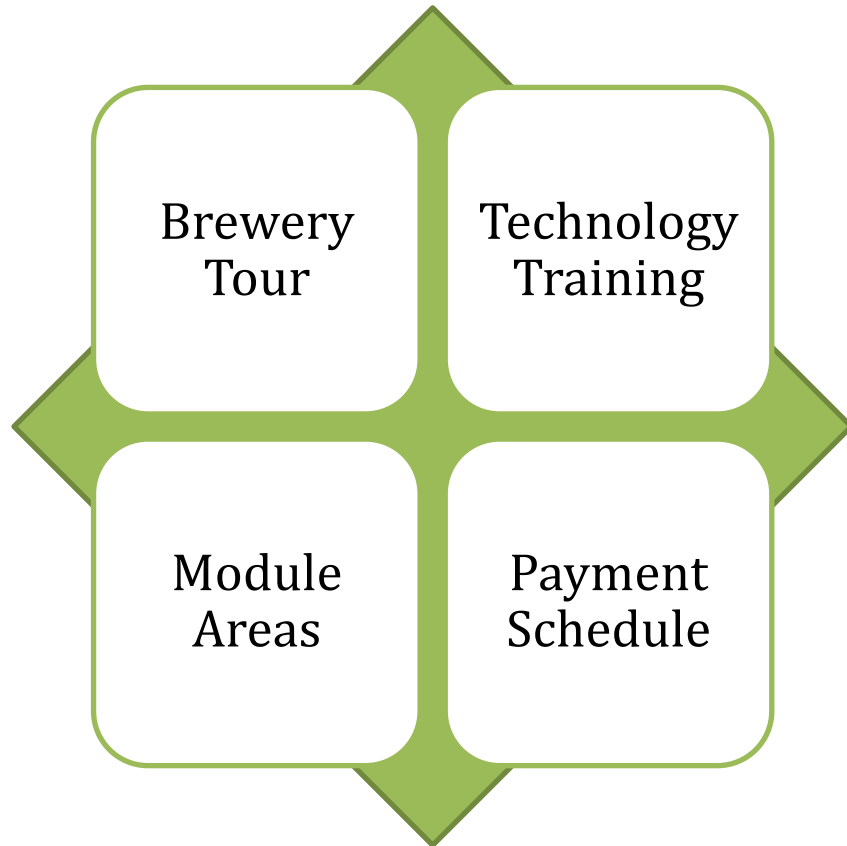
These are the tasks to be completed in the first week with the interns. The lead OT will facilitate introductions and begin the process but it is expected that you assist in each activity. Mostly we just need to ensure a complete orientation for safety purposes, but a good intro leads to success later on.

First Half

History of Brewery and Core Values	→	Work Responsiblities and Expectations	→	How to Be Successful in a Brewery

Throughout the first half of the program, these items are expected to be addressed and engrained in each intern. You are welcome to create a welcome sheet explaining the brewery's history and values to be handed out on day one. The work expectations will be discussed with the lead OT, who will assist in ensuring carryover with the interns.

Last Half
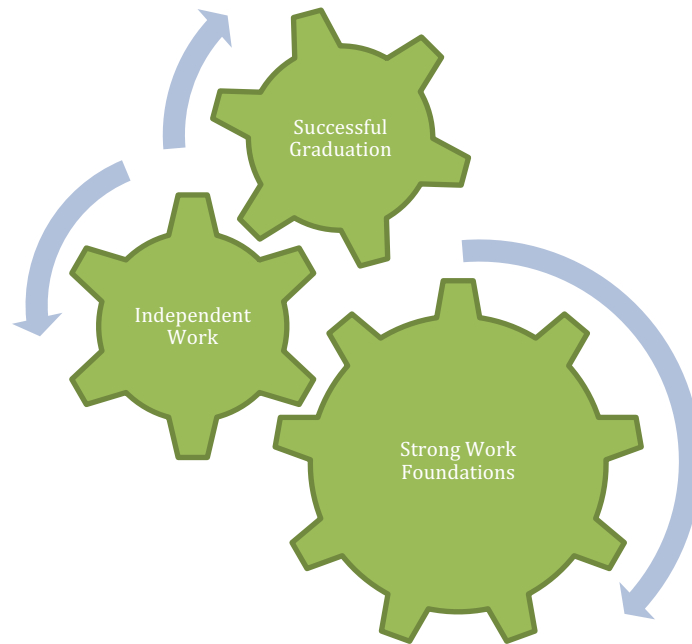
This final portion is the wrap-up where the interns have proven themselves capable employees at your brewery and have developed the above skills. If you feel that any intern has not reached these expectations and the lead OT has not already addressed the issue, please inform the lead OT at once. This program only works if a true collaborative partnership is formed.

First Day Agenda Worksheet

This is designed to make the first day go smoothly and address any question, and provide

HR with necessary contact information. Please fill out the information below:

Intern contact number/email:

Parking/Lunch arrangements:

Any new request/guidelines/notes/suggestions for the intern's first day:

Please forward this form to HR and lead OT when complete

APPENDIX I – Follow-up Survey

The following questions are a follow-up to your experience in the Supported Brewing Initiative and to help gather employment data for our analysis. Please answer the following questions as best as able:

1. Have you had a job interview since completing the Supported Brewing Initiative?

    a. Yes
    b. No

2. If so, how many interviews have you been offered?

    a. 1
    b. At least 3
    c. More than 3

3. Have you been hired to a new position/job?

    a. Yes
    b. No

4. If so, how long have you been working in your position?

    a. Less than a month
    b. At least 3 months
    c. More than 6 months

5. Do you feel that the Supported Brewing Initiative helped you achieve your employment goals?

    a. Yes
    b. No
    c. I don't know

6. If yes, please describe how this program has supported you in your journey:

EXECUTIVE SUMMARY

According to the 2006 World Health Organization (WHO) document on the international challenges resulting from neurological disorders, "traumatic brain injury is the leading cause of death and disability in children and young adults around the world and is involved in nearly half of all traumatic deaths" (p. 164). In 2013, there were 2.8 million traumatic brain injury (TBI)-related emergency department visits, hospitalizations, and deaths in the U.S. (CDC, 2018). Among those, around 329,290 children ages 19 and younger were treated for sports and recreation-related TBIs Between 2001 to 2012, the rate of emergency department visits more than doubled among young adults. These figures provide a picture of the numbers of students entering or currently participating in 4-year degrees from colleges and universities. While programs like Project Career are in full effect to assist these students manage their symptoms for a successful student career, it is essential for OT practitioners to be present and active in the steps following graduation.

Description of the Proposed Program – The Supported Brewing Initiative will be a pilot supported employment internship program designed to promote job skills and increase chances for these students with TBI to gain access to gainful employment following graduation. The use of a brewery setting provides new and meaningful industries for the supported employment (SE) network in the U.S. as well as advocates for OT's role in designing and implementing such programs.

Why is the Supported Brewing Initiative needed?

Several factors were considered while developing this program. Three main factors

justifying the need for this program are outlined in Table E.1.

Table E.1 – Justification for the Supported Brewing Initiative

Contributing Factor	Explanation
Mild TBIs result in long-term effects that compromise academic performance in college-age students	Although a TBI might be rated as mild or moderate, the young person may experience significant long-term effects. Researchers report that college students who had a TBI experienced long-term and pervasive symptoms impacting their academic performance (LaForce and MacLeod, 2001 & Kennedy, Krause, and Turkstra, 2008).
The positive impact of education for young people with a TBI is not as clear	Wehman, Chen, West, and Cifu (2014) reported that of the 200 participants, 51% held current employment at the 10-year follow up and 73% were employed at some point following high school. A major finding of this study suggested that those participants who held goals for post-secondary education were more likely to find employment following high school, especially with strong student engagement and outside organization support
Difficulty finding work following diagnosis of TBI	Barriers include the effects of the disability itself, lack of education or training, limited use of assistive and general-use technology to accommodate the cognitive impairments caused by TBI, lack of role models within the disability community, and negative perceptions of employers (Bureau of Labor Statistics, 2018).

Objectives of the Program

- To ensure that all students with TBI graduating from college have opportunities to gain meaningful job experience in a fun and collaborative environment so that they can better increase their chances for successful gainful employment

- To improve the quality of life for these students and their families by ensuring access to financial security and meaningful occupations

- To disseminate information on the use of non-traditional settings for SE and advocate for OT's role in developing and implementing such programs

Why is OT needed for SE?

OT practitioners have played a key role in helping individuals with disabilities return to work, however the majority of available evidence highlights the need for individuals with developmental disabilities and severe mental illness (AOTA, 2015; Oka, et al., 2004; Désiron, et al., 2011). The scope of OT practice encompasses all factors related to returning to work. OT practitioners have the knowledge and skills to provide interventions associated with preparing young adults to access gainful employment following graduation from college. Despite the obvious benefits that OT practitioners can add to a SE program, the development of meaningful, occupation-based programs are limited and OT's role in each individual's SE program is poorly documented (Désiron, et al., 2011; Oka, et al., 2004; Zuger et al., 2002). As a result, a focus of the Supported Brewing Initiative will be to advocate for OT practitioner's direct involvement in designing, developing, and leading SE programs to continue expanding the profession's scope of practice.

Program Details

To properly implement the Supported Brewing Initiative, several phases must be completed as described in Tables E.2 – E.4.

Table E.2 – Phase 1: Recruitment Activities

Description	Details
Flyer Distribution	Information will be sent to Project Career participants and student support centers
Emails	Descriptions of the program will be sent to local breweries and state-sponsored TBI organizations

Table E.3 – Phase 2: Orientation

Description	Details
Brewery Tour	Allow each participant to acquaint themselves with the brewery environment and their new workplace
Review Onboarding Manual	Step-by-step guide to the internship experience with a visual roadmap for expectations and events
Match Peer Mentors	Each participant will be matched with a peer mentor to assist with coping and assimilating to the job role
Collect Baseline Data	Conduct outcomes assessments and collect demographic data

Table E.4 – Phase 3: Modules

Description	Details
Brew Floor	Provides direct exposure to brewery-specific job skills and engages participants in the meaningful occupation of brewing beer
Tasting Room/Tours	Improves and cultivates communication and social skills crucial to establishing job connections and networking skills

As part of the Supported Brewing Initiative, several resources must be allocated for successful implementation of the program. Onboarding manuals will be created and distributed to the interns, brewery managers, and brewery staff involved in the program. A revised OT evaluation kit will be included for the lead OT practitioner to include reviews and instructions for each assessment and screening tool. Additional references and training materials will also be included to supplement the assessment resources. Finally, an educational brochure and resources book will be provided to each participant and their families as well as to prospective participants to further explain SE and the purpose of the Supported Brewing Initiative.

To sustain this program, the evaluation of the activities and outcomes of the program will be needed. Two particular activities will be analyzed to confirm success of the program: (1) an evaluation of the collection of job skills and training success and (2) an evaluation of the employment success achieved by each participant. This data will collected from the Modified Job Interview scale, Big Five Inventory, surveys conducted throughout the program, and follow-up phone interviews to determine employment status and success in a gainful position.

Budget

The budget for this program will be based on the time costs of the lead OT practitioner to carry out program activities, as well as the high cost of paying the interns for their time in the program. Non-billable time to set-up and run the program will cost approximately $15,600 in year one and $31,200 in year two. Intern salaries will cost about $162,000 in year one and $324,000 in year two. The increases in cost are associated with the assumed increase in program success and popularity as more locations are added. Expenses to run the program include assessment materials and supplies, intervention materials, and printing manuals and resources for the program. For year one, expenses are expected to be about $170, and in year two are expected to double due to additional programs, roughly $340. Funding for the Supported Brewing Initiative will mostly come from government funded grants and AOTF grants, with additional funding through crowdsourcing and private sources.

Dissemination Plan

After the Supported Brewing Initiative is active, efforts will be made to share all

information and outcomes gained through this program. Dissemination efforts will focus on targeting OT practitioners across the US (primary audience), federal and local government bodies in charge of overseeing supported employment services (secondary audience), and individuals with disabilities having difficulty achieving gainful employment (tertiary audience). To disseminate this information to these groups, Table E.7 lists the activities that will be completed.

Table E.5 – Dissemination Activities

Activity	Target Audience
Person-to-Person Activities	
Professional Conference presentations (i.e. AOTA)	Primary
Collaborative planning meetings and in-services with brewery managers and families	Tertiary
Educational presentation to new potential brewery partnerships, TBI organizations, and local government officials	Secondary Tertiary
Guest lectures and in-service presentations at local, regional, and national OT practitioner educational programs and associated Offices of Disability Services	Primary
Written Information	
Professional reports and articles submitted to reputable OT practice sources (i.e. AOTA, OT Practice, etc.)	Primary
Educational brochure on Supported Brewing Initiative	Secondary Tertiary
Electronic Media	
Memos, briefs, and outcomes reports distributed to participating brewery managers, participants, and families	Secondary Tertiary
Social Media Outlets	Primary Secondary Tertiary

Conclusion

      The goal of the Supported Brewing Initiative is to advocate for OT's role in work and supported employment by providing meaningful, occupation-based, and client-centered programs designed around unique and non-traditional environments. With a growing number of young adults and veterans entering college with TBI and planning to enter the workforce as gainful individuals, it is imperative that OTs lead the development and implementation of supported employment programs nationwide. Through implementation and redesign, the program intends to expand OT practice and improve opportunities for gainful employment and successful transitions into the working world for millions of college students with TBI.   In addition to its pilot nature, review and analysis of the program's outcomes will determine its effectiveness as an OT intervention and publish results in order to advance OT practice and rehabilitation science as a whole. In combination with the outlined dissemination plan, the Supported Brewing Initiative has the potential to significantly and positively influence OT practice and the lives of young adults and veterans with TBI.

FACT SHEET

BOSTON UNIVERSITY

Supported Brewing Initiative:
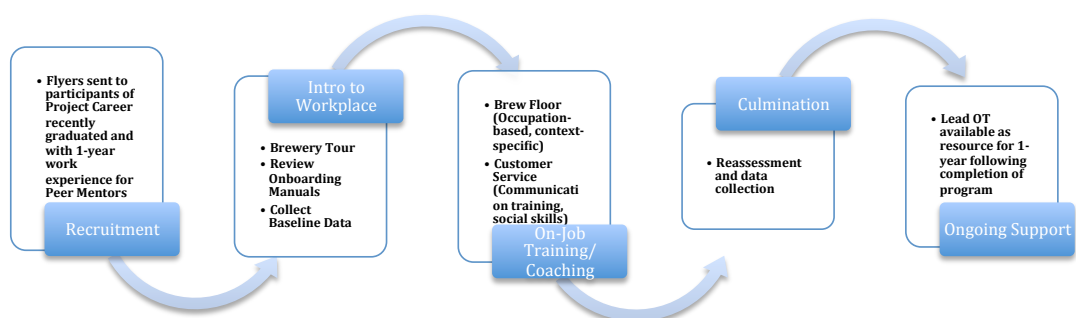***A Pilot Supported Employment Program***
Kevin Minner MS, OTR/L
OTD Candidate

Introduction to Problem

- Increasing numbers of youth and veterans entering college with TBI seeking degrees and gainful employment following graduation

- Supported employment practices have not expanded into non-traditional settings and fast-growing industries

- Supported employment can be characterized as paid work in integrated work settings with ongoing support for individuals with disabilities in the open labor market. Paid work for individuals means the same payment for the same work as for workers without disabilities

(WASE, 2018; Bowman et al., 2015; Goodwill, 2018; BARC, 2018; Graham, et al., 2016; CDC, 2018)

Introduction to the Solution: Supported Brewing Initiative

- 15 week supported employment internship program for 6 participants

- Focuses on Big Five Personality Traits crucial to employability

- Uses Project Career Peer Mentoring to improve transitional experience from school to work

(Tett & Burnett, 2003; Barrick & Mount, 1991; Soldz & Vaillant, 1999; Judge & Zapata, 2015; Hibbard, et al., 2005; Kersten et al., 2015)

Summary of the Supported Brewing Initiative

- Promotes the unique role of OT in providing meaningful and gainful opportunities for people with TBIs to gain job experience for gainful participation in society while reducing stigma and bias associated with the condition.

http://allaboutbeer.com/article/self-serve-bars-breweries/

BOSTON UNIVERSITY

Supported Brewing Initiative:
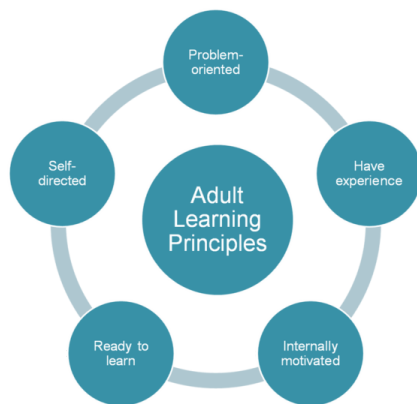***A Pilot Supported Employment Program***
Kevin Minner MS, OTR/L
OTD Candidate

Theory and Evidence-Base

Self-Determination Theory

- Motivation exists to fulfilling 3 basic psychological needs:
    - Autonomy
    - Competency
    - Relatedness
- Everyone has an inner drive for personal growth and development

Adult Learning Theory

(Ryan & Deci, 2000; Knowles, 1973; https://tofasakademi.com/what-is-adult-learning-theory/)

Impact on Future Occupational Therapy Practice

- Advocates for OT practitioners to be involved in the supported employment process

- Expands OT scope of practice to include meaningful and client-centered interventions for improving QOL for young adults with TBI

- OT practitioners have a unique ability to design and develop meaningful, occupation-based supported employment interventions

References

Bakersfield ARC (BARC). (2018). About us. https://barc-inc.org

Barrick, M., & Mount, M. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology, 44*, 1-26.

Bowman, D., Borlagdan, J., & Bond, S. (2015). Making sense of youth transitions from education to work. *Brotherhood of St Laurence*, Fitzroy, Vic.

Centers for Disease Control. (2018). Rates of TBI-related emergency department visits by age group—United States, 2003-2013. Retrieved from http://www.cdc.gov/nchs.ahcd.htm

Goodwill. (2018). Supported employment. https://www.goodwillsew.com/training-jobs-suppport-services/supported-employment.

Graham, C., West, M., Bourdon, J., Inge, K., & Seward, H. (2016). Employment interventions for return to work in working aged adults following traumatic brain injury (TBI): A systematic review. *Campbell Systematic Reviews, 6*, 1-133. DOI: 10.4073/csr.2016.6.

Hibbard, M.R., Cantor, J., Gundersen, N., Charatz, H., Gordon, W.A., Brown, M., Avner, J., Lowenstein, J., Berk, W., Quick, S., & Weinberger, J. (2005). Mentoring partnership program: Program manual.

Judge, T., & Zapata, C. (2015). The person-situation debate revisited: Effect of situation strength and trait activation on the validity of the big five personality traits in predicting job performance. *Academy of Management Journal, 58*(4), 1149-1179. https://doi.org/10.5465/amj.2010.0837

Kamp, M., Lynch, C., & Haccou, R. (2018). *Handbook Supported Employment*. Retrieved from: www.wase.net/handbookSE.pdf

Kersten, Kayes, Cummins, Siegart, Elder, Weatherall, ...Mcpherson, (2015) Peer Mentoring after traumatic brain injury (TBI)- a valuable experience for mentees and mentors. *Archives of Physical Medicine and Rehabilitation,96*(10), e87.

Soldz, S., & Vaillant, G. (1999). The big five personality traits and the life course: A 45-year longitudinal study. Journal of Research in Personality, 33, 208-232. Retrieved from: http://www.idealibrary.com

Tett, R., & Burnett, D. (2003). A personality trait-based interactionist model of job performance. Journal of Applied Psychology, 88(3), 500-517. DOI: 10.1037/0021-9010.88.3.500

REFERENCES

America's Heroes At Work. (2018). Traumatic brain injury (TBI) and employment: Frequently asked questions. *Office of Disability Employment Policy*.

American Occupational Therapy Association (AOTA). (2018). Work & Industry. Retrieved from https://www.aota.org/Practice/Work-Industry.aspx

Artman, L., & McMahon, B. (2013). Functional limitations in TBI and their relationship to job maintenance following work re-entry. *Journal of Vocational Rehabilitation, 39*, 13-21.

Bakersfield ARC (BARC). (2018). About us. https://barc-inc.org

Barrick, M., & Mount, M. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology, 44*, 1-26.

Boosman, Visser-Meily, Post, Lindeman, & Van Heugten (2012) Exploring the relation between learning style and cognitive impairment in patients with acquired brain injury. *Neuropsychological Rehabilitation, 22*(1), 26-39.

Bowman, D., Borlagdan, J., & Bond, S. (2015). Making sense of youth transitions from education to work. *Brotherhood of St Laurence*, Fitzroy, Vic.

Brewers Association. (2018). National Beer Sales & Production Data. Retrieved from https://www.brewersassociation.org/statistics/national-beer-sales-production-data/

Bubar, K. (2018). Five things you should know when returning to work after a traumatic brain injury, 1-2.

Bureau of Labor Statistics. (2018). Persons with disability: Labor force characteristics—2018. USDL-12-1125. United States Department of Labor.

Burgstahler, S. (2013) Work-based learning experiences help students with disabilities transition to careers: A case study of University of Washington projects. *Work 48,* 399-405.

Cahill, S., Rotter, J., Lyons, K., & Marrone, A. (2014). Survivors of brain injury: The narrative experiences of being a college or university student. *Canadian Journal of Occupational Therapy, 8*(2), 93-101. DOI: 10.1177/0008417414533185.

Cancilliere, C., Donovan, J., Stochkendahl, M., Biscardi, M., Ammendolia, C., Myburgh, C., & Cassidy, J. (2016). Factors affecting return to work after injury or illness: Best evidence synthesis of systematic reviews. *Chiropractic & Manual Therapies, 24*(32), 1-23.

Cancilliere, C., Kristman, V., Cassidy, J., Hincapié, C., Côté, P., Boyle, E., Carroll, L., Stålnacke, B., Boussard, C., & Borg, J. (2014). Systematic review of return to work after mild traumatic brain injury: Results of the international collaboration on mild traumatic brain injury prognosis. *American Congress of Rehabilitation Medicine, 95*(2 Suppl 2), S201-209.

Centers for Disease Control. (2018). Rates of TBI-related emergency department visits by age group—United States, 2003-2013. Retrieved from http://www.cdc.gov/nchs.ahcd.htm

Cicerone, K. D. (2002). Remediation of 'working attention' in mild traumatic brain injury. *Brain Injury, 16*(3), 185-195.

Defense and Veterans Brain Injury Center (2015). DoD worldwide numbers for TBI. Retrieved from http://dvbic.dcoe.mil/dod-worldwide-numbers-tbi

Désiron, H., Rijk, A., Hoof, E., & Donceel, P. (2011). Occupational therapy and return to work: A systematic literature review. *BMC Public Health, 11*(615), 1-14. Retrieved from: http://www.biomedcentral.com/1471-2458/11/615

Discenna, T. (2016). The discourses of free labor: Career management, employability, and the unpaid intern. *Western Journal of Communication, 80*(4), 435-452.

Ericsson, K. A., Krampe, R. Th., & Tesch-Römer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review 100*, 363-406. http://dx.doi.org/10.1037/0033-295X.100.3.36

Eyler, J. (2009). The power of experiential education. *Liberal Education*, 24-31.

Gamble, D., & Moore, C. (2003). Supported employment: Disparities in vocational rehabilitation outcomes, expenditures and service time for persons with traumatic brain injury. *Journal of Vocational Rehabilitation, 19*, 47-57.

Gault, J., Leach, E., & Duey, M. (2010). Effects of business internships on job marketability: The employers' perspective. *Education & Training, 52*(1), 76-88.

Gladwell, M. (2008). *Outliers: The story of success*. New York: Little, Brown, and Co.

Gonzalez, C., & Elliot, M. (2015). Faculty attitudes and behaviors towards student veterans. *Journal of Postsecondary Education and Disability, 29*(1), 35-46.

Goodwill. (2018). Supported employment. https://www.goodwillsew.com/training-jobs-support-services/supported-employment

Graham, C., West, M., Bourdon, J., Inge, K., & Seward, H. (2016). Employment interventions for return to work in working aged adults following traumatic brain

injury (TBI): A systematic review. *Campbell Systematic Reviews, 6*, 1-133. DOI: 10.4073/csr.2016.6.

Hibbard, M. R., Cantor, J., Charatz, H., Rosenthal, R., Ashman, T., Gundersen, N., Ireland-Knight, L., Gordon, W., Avner, J., & Gartner, A. (2002). Peer support in the community: Initial findings of a mentoring program for individuals with Traumatic Brain Injury and their families. *Journal of Head Trauma Rehabilitation, 17*(2), 112-131.

Hibbard, M.R., Cantor, J., Gundersen, N., Charatz, H., Gordon, W.A., Brown, M., Avner, J., Lowenstein, J., Berk, W., Quick, S., & Weinberger, J. (2005). Mentoring partnership program: Program manual.

John, O. P., & Srivastava, S. (1999). The Big-Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research, 2*, 102–138. New York: Guilford Press.

Johnson, R. & Zagarella, R. (2008). Practical professionalism: Health science students put theory into practice. *Impact.* Retrieved from https://www.bu.edu/hsdeptclined/files/2012/04/practicalprofessionalism.pdf

Judge, T., & Zapata, C. (2015). The person-situation debate revisited: Effect of situation strength and trait activation on the validity of the big five personality traits in predicting job performance. *Academy of Management Journal, 58*(4), 1149-1179. https://doi.org/10.5465/amj.2010.0837

Kamp, M., Lynch, C., & Haccou, R. (2018). *Handbook Supported Employment*. Retrieved from: www.wase.net/handbookSE.pdf

Keilhofner, G., Mallinson, T., Crawford, C., Nowak, M., Rigby, M., Henry, A., & Walens, D. (2004). The Occupational Performance History Interview-II. Retrieved from https://www.moho.uic.edu/productDetails.aspx?aid=31

Kennedy, M.R.T., Krause, M.O., & Turkstra, L.S. (2008). An electronic survey about college experiences after traumatic brain injury. *NeuroRehabilitation*, *23*, 511-520.

Kersten, Kayes, Cummins, Siegart, Elder, Weatherall, ... McPherson, (2015) Peer Mentoring after traumatic brain injury (TBI)- a valuable experience for mentees and mentors. *Archives of Physical Medicine and Rehabilitation, 96(*10), e87.

Kushner, D., & Johnson-Greene, D. (2014). Changes in cognition and continence as predictors of rehabilitation outcomes in individuals with severe traumatic brain injury. *Journal of Rehabilitation Research & Development 51*(7), 1057-1068.

LaForce, Jr., R. & MacLeod, L. M. (2001). Symptom cluster associated with mild traumatic brain injury in university students. *Perceptual and Motor Skills*, *93*, 281-288.

López, O., Springer, S., & Nelson, J. (2015). Veterans in the college classroom: Guidelines for instructional practices. *Adult Learning, 27*(4), 143-151. DOI: 10.1177/1045159515601825.

Malec, J., & Moessner, A. (2005). Replicated positive results for the VCC model of vocational intervention after ABI within the social model of disability. *Brain Injury, 20*(3), 227-236.

Martorello, L. (2006). The optimal length of clinical internship experiences for entry-level physical therapist students as perceived by center coordinators of clinical study: A pilot study. *Journal of Physical Therapy Education 20*(1), pp. 56-58. Retrieved from https://search-proquest-com.ezproxy.bu.edu/docview/217073738/fulltextPDF/404B332BB89E46A0PQ/1?accountid=9676

Matérne, M., Lundqvist, L., & Strandberg, T. (2017). Opportunities and barriers for successful return to work after acquired brain injury: A patient perspective. *Work, 56*, 125-134.

McDiarmid, D., Rapp, C., & Ratzlaff, S. (2005). Design and initial results from a supported education initiative: The Kansas consumer as provider program. *Psychiatric Rehabilitation Journal 29*(1), 3-9.

McNamee, S., Walker, W., Cifu, D., & Wehman, P. (2009). Minimizing the effect of TBI-related sequelae on vocational return. *Journal of Rehabilitation Research & Development,* 46(6), 893-908.

Mills, L. (2017). Gas network operator gives students the skills for work. Leicester, UK.

Minton, D., Elias, E., Rumrill, P., Hendricks, D., Jacobs, K., Leopold, A., Nardone, A., Sampson, E., Scherer, M., Cormier, A., Taylor, A., & DeLatte, C. (2017). Project career: An individualized postsecondary approach to promoting independence, functioning, and employment success among students with traumatic brain injuries. *Work, 53*, 35-43.

Murphy, L., Chamberlain, E., Weir, J., Berry, A., Nathaniel-James, D., & Agnew, R. (2006). Effectiveness of vocational rehabilitation following acquired brain injury: Preliminary evaluation of a UK specialist rehabilitation programme. *Brain Injury 20*(11), 1119-1129.

Oka, M., Otsuka, K., Yokoyama, N., Mintz, J., Hoshino, K., Niwa, S., & Liberman, R. (2004). An evaluation of a hybrid occupational therapy and supported employment program in Japan for persons with schizophrenia. *American Journal of Occupational Therapy, 58*(4), 466-475.

Regent University. (2008). Mock Interview Rating Scale. Retrieved from https://www.regent.edu/admin/stusrv/student_dev/docs/Workshops/MInterviews/MIRatingScale.pdf

Samra-Grewal, J. (2000). Traumatic brain injury and return to work: A review of factors that have negative, positive, and no relationship to vocational outcome in brain injured individuals. Workers' Compensation Board of British Colombia.

Shoenfelt, E., Stone, N., & Kottke, J. (2013). Internships: An established mechanism for increasing employability. *Internships,* 24-28.

Smith, S., Smith, C., & Caddell, M. (2015). Can pay, should pay? Exploring employer and student perceptions of paid and unpaid placements. *Active Learning in Higher Education, 16*(2), 149-162.

Soldz, S., & Vaillant, G. (1999). The big five personality traits and the life course: A 45-year longitudinal study. *Journal of Research in Personality, 33*, 208-232. Retrieved from: http://www.idealibrary.com

Struchen, Davis, Bogaards, Hudler-Hull, Clark, Mazzei, Sander, & Caroselli (2011) Making connections after brain injury: Development and evaluation of a social peer-mentoring program for persons with traumatic brain injury, *Journal of Head Trauma Rehabilitation, 26*(1):4-19

Syed, M. (2010). *Bounce: Mozart, Federer, Picasso, Beckham, and the science of success.* New York: HarperCollins

Taylor, A., & Hooley, T. (2014). Evaluating the impact of career management skills module and internship programme within a university business. *British Journal of Guidance & Counseling 42*(5), 487-499.

Tett, R., & Burnett, D. (2003). A personality trait-based interactionist model of job performance. *Journal of Applied Psychology, 88*(3), 500-517. DOI: 10.1037/0021-9010.88.3.500

Todis, B., & Glang, A. (2008). Redefining success: Results of a qualitative study of postsecondary transition outcomes for youth with traumatic brain injury. *Journal of Head Trauma Rehabilitation, 23*(4), 252-263.

Todis, B., Glang, A., Bullis, M., Ettel, D., & Hood, D. (2011). Longitudinal investigation of post-high school transition experiences of adolescents with traumatic brain injury. *Journal of Head Trauma Rehabilitation, 26*(2), 138-149.

Twamley, E., Baker, D., Norman, S., Pittman, J., Lohr, J., & Resnick, S. (2013). Veterans health administration vocational services for operation Iraqi freedom/operation enduring freedom veterans with mental health conditions. *Journal of Rehabilitation Research & Development, 50*(5), 663-670.

U.S. Department of Education, National Center for Education Statistics. (2014). Annual earnings of young adults. *The Condition of Education 2014* (NCES 2014-083). Retrieved from https://nces.ed.gov/fastfacts/display.asp?id=77

Van Velzen, J., van Bennekom, C., Edelaar, M., Sluiter, J., & Frings-Dresen, M. (2009). How many people return to work after acquired brain injury? A systematic review. *Brain Injury, 23*(6), 473-488.

Wehman, P., Chen, C., West, M., & Cifu, G. (2014). Transition planning for youth with traumatic brain injury: Findings from the National Longitudinal Transition Survey-2. *NeuroRehabilitation, 34*(2), 365-372. Retrieved from: https://www.ncbi.nlm.nih.gov/pubmed/24419015

Whyte, J., Polansky, M., Fleming, M., Coslett, H.B., & Cavallucci, C. (1995). Sustained arousal and attention after traumatic brain injury. *Neuropsychologia, 33*(7), 797-813.

Zuger, R., Brown, M., O'Neill, J., Stack, R., & Amitai, H. (2002). Vocational rehabilitation, traumatic brain injury and the power of networking. *TBI-NET*, New York, NY, 1-35

CURRICULUM VITAE