A Dissertation

entitled

What can be Learned from the Country's First University Owned Brewery and Brewpub?

A Case Study

by

David Kubacki

Submitted to the Graduate Faculty as partial fulfillment of the requirements for the

Doctor of Philosophy Degree in Higher Education

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December 2020

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An Abstract of

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Higher education and beer have long been associated. However, those associations have not always been positive or productive. With the Creation of Innovation Brew Works, the site for this qualitative case study, California State Polytechnic University Pomona (Cal Poly Pomona) has established the first fully operational on-campus brewery and brewpub in higher education. Utilizing Kolb's Theory on Experiential Learning as the theoretical framework, this dissertation provides insight into what can be broadly learned from the country's first university owned brewery and brewpub. Rooted in illustrating this novel student amenity and its experiential learning opportunities, this dissertation also provides an example of the decision making process in higher education. Findings, which helped in the creation and the continued operation of Innovation Brew Works include: the Cal Poly Pomona environment; administrative control and oversight; establishing Innovation Brew Works' identity; and focusing on the university's mission. With an emphasis on learn by doing, Cal Poly Pomona's Innovation Brew Works, highlights a campus amenity that provides academic, social, and financial incentives.

Dedications

Honestly, it is hard to know where to start and where to end with a dedication page. First and foremost, I want to thank my wife, Jillian. You are so supportive, loving and graceful. For that reason, I ask, what degree should I get next? I hear the University of Michigan has a good business program. To my now three kids, Ellie, Addelyn and Annabelle, you have not made this easy, but have made every day more enjoyable than the last. To my parents, thank you for helping me to be my best-I will always try to make you proud. I am not sure any of us thought I would finish college, let alone a terminal degree. To my brother (Dan) and my sister (Amy), this degree requires no shade. Instead, I want to thank you both for always being supportive and available. Look, even I can show maturation. To the Kindler's, thank you for being supportive and interested and not advising Jillian to find "greener" pastures. To my Higher Education cohort members, you made this experience memorable, approaching all aspects with humor and community. Finally, to our close friends, the Van Schaick's, things in Texas may be bigger, but Ohio/Michigan will always be better #VanKubbs.

Acknowledgements

First, I would like to thank my Dissertation Chair, Deb Harmening. Prior to asking you to be my Dissertation Chair, I asked myself with whom I thought I could be most honest. Each time, I came back to you. I hope you always maintain that sincerity and proximity with your students. Next, I would like to thank Marijo Tamburrino. You had just retired from an illustrious career as a psychiatrist and chair when I asked you to participate on this committee. You have been my boss, my mentor, my friend, and now my colleague. I cannot convey the level of respect I have for you both as a person and as a professional. Oh yeah, Ron is okay too. Thank you to Ben Dewald from Cal Poly Pomona. You had absolutely no connection to me and no reason to support this research, but you have consistently been one of the first people to provide me feedback each step of the way. There is honestly no way I can repay you for your service on this committee. I hope to buy you a drink at some point when I am back in the California area. To Penny Poplin-Gosetti, thank you for agreeing to serve on my committee. I was probably the last person you expected to do qualitative research, but hopefully that inspires you to know that anyone can change. Next, I want to thank all the Cal Poly Pomona administrators, staff and students involved in this study. I want to thank my current boss, Bhramar Mukherjee, who has already demonstrated great support for educational and professional growth. I am amazed at, despite all you have accomplished, your incredible attention to detail and relations with staff. Lastly, I want to thank my Uncle Jim, who provided me with the early guidance of keeping my dissertation narrow and focused. I can still vividly remember pictures of your graduation photos in the “back room” at my grandparent’s house.

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Chapter One

Introduction

Chapter 1 begins with an overview and background of the relationship between alcohol and higher education, as well as the competition that exists in the recruitment of students. The next section describes the craft beer "boom" and the potential a brewery and brewpub could have on the campus environment and on a university's academic mission. Following this description, the theoretical framework for this study is briefly described and the research questions are stated. The next section describes the research methodology and the procedures for how data was collected and analyzed. From there, contributions to the literature are discussed before highlighting assumptions, biases and limitations of the study.

Statement of the Problem

Higher education and beer have long been associated. However, those associations have not always been positive or productive. With the creation of Innovation Brew Works, the first university-owned brewery and brewpub, California State Polytechnic University Pomona (Cal Poly Pomona) has taken the first step toward integrating an operational brewery and brewpub into the campus fabric and environment.

According to the National Institute of Alcohol Abuse and Alcoholism (NIAAA), drinking at college has become a "ritual that students often see as an integral part of their higher education experience" (para. 2). A national survey conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA) found that almost 60 percent of college students ages 18-22 drank alcohol in the past month and almost two out of three engaged in binge drinking during that same time frame (2014 & 2014).

According to Wechsler, Dowdall, Maenner, Gledhill-Hoyt, & Lee (1998) one in four college students reported academic consequences from drinking, including missing class, falling behind in class, doing poorly on exams or papers, and receiving lower grades overall. Outside of the academic arena, drinking has significantly affected the number of deaths, assaults and sexual assaults that have occurred on campus (Hingson, Zha, & Weitzman, 2009 & Hingson, Heeren, Winter, & Wechsler, 2005). According to Hingson et al. (2009), approximately 1,825 college students between 18 and 24 die from alcohol-related injuries, including motor vehicle accidents, each year. Additionally, Hingson et al. (2005) found that each year approximately 696,000 students between 18 and 24 are assaulted by students under the influence and about 97,000 students report experiencing alcohol-related sexual assault or date rape.

Given the described climate of alcohol on campus, why would a university choose to open a brewery and brewpub on campus?

Simply stated, competition for students is fierce. As such, universities are constantly evaluating their academic offerings and campus amenities to stand out amongst their peers. According to Ruffalo Noel Levitz (2018), public institutions spend approximately $536 to recruit a single undergraduate student, while private institutions spend approximately $2,357 to recruit a single undergraduate student. In his 2007 study, Reynolds identified campus facilities as a significant factor in recruiting and retaining students. According to Reynolds (2007), “The built environment is fundamentally related to recruitment and retention; a positive relationship does exist that is profound and interrelated. Campus planning and operation of the built environment should be an integral part of the recruitment and retention strategy” (p. 78). University spending on

athletic facilities is well documented. Many, including the Chicago Tribune's Hobson and Rich (2015), describe the competition to have the best athletic facilities as an "arms race" on college campuses. However, this competition has created athletic facilities that are becoming harder to differentiate from each other. Therefore, some universities are looking into other college amenities to attract students.

Despite the complicated relationship between higher education and alcohol, the craft beer and the brewery boom has presented an opportunity for universities. Currently, the craft beer industry is experiencing unprecedented growth. In 2010, there were 1,813 breweries operating in the United States. By 2018, that number had risen to 7,450 (National Beer Sales & Production Data, 2020). That's a 310% increase in the last decade. According to the Brewers Association, 854 microbreweries opened in 2018 alone. Noticing the demand for educational brewing programs, higher education institutions responded with a myriad of degree and non-degree programs including University of California Davis, San Diego State University, Colorado State University, Siebel Institute of Technology, and Oregon State University. And while these universities provided educational brewing opportunities, it wasn't until Innovation Brew Works opened in 2014 that a university fully integrated a brewery and brewpub on campus, serving both students and the public.

While the creation of an on campus brewery and brewpub is a novel amenity for a college campus, there are ethical considerations to keep in mind. In her seminal article, "Ethical Principles and Ethical Decisions in Student Affairs," Kitchener (1985) outlined five principles to consider during the decision making process. These principles include respecting autonomy, doing no harm, benefiting others, being just, and being faithful. In

order to justify its place on a college campus, Cal Poly Pomona needed to consider these principles while tying into the university's academic mission. Moreover, Cal Poly Pomona needed to weigh the benefits to others against the risk of jeopardizing autonomy and doing no harm. To do this, Cal Poly Pomona tapped into an essential component of the student experience: providing practical learning experiences to enhance employability and work readiness.

Graduating students who are employable and work ready should be a central focus of higher education institutions. According to a 2013 Gallup poll, the most important factor in choosing which college or university to attend is the percentage of graduates who are able to get a good job (Calderon & Sidhu, 2013). At 41%, this factor was more important to respondents than both the price of the college or university (37%) as well as the percentage of students who graduate from the college or university (16%). Similarly, the Higher Education Research Institute & Cooperative Institutional Research Program's 2015 Freshman Survey found that 85% of respondents rated 'getting a good job' as 'very important' in deciding to go to college. This factor outpaced 'learning more about things that interest me' and to 'get training for a specific career' (Eagan, Stolzenberg, Bates, Aragon, Suchard, & Rios-Aguilar, 2015). As Calderon & Sidhu (2013) point out, "Americans are interested in understanding the return on investment for higher education" (para. 8). Given that research has shown that student debt is significantly outpacing wage growth, there are legitimate reasons for students to be concerned. According Nasiripour & Forster (2016), an analysis done by the Huffington Post and the W.E. Upjohn Institute for Employment Research, median wages have only

increased 1.6% (from $42,342 to $43,000) over the last 25 years while median debt has risen 163.8% (from $12,110 to $31,941).

While the above highlights the value prospective students place on employment after graduation, it seems that employers do not feel institutions of higher education are adequately preparing college graduates for employment. In their 2018 Job Outlook Survey, the National Association of Colleges and Employers found a gap between graduates' perception of skills and the views of employers who hire them. In nearly every category surveyed (except digital technology and teamwork/collaboration), employers found students less proficient than students considered themselves. Specifically, employers found students lacking competency in key areas including professionalism/work ethic, oral/written skills, leadership, and critical thinking/problem solving (National Association of Colleges and Employers, 2017). Similarly, in a survey of 704 employers done by the *Chronicle of Higher Education* and American Public Media's Marketplace, half of respondents said they had "trouble finding recent graduates qualified to fill positions at their company or organization" and "nearly a third gave colleges just fair to poor marks for producing successful employees" (Fischer, 2013). Moreover, a 2009 survey conducted by Peter D. Hart Associates found that only one in four employers thought that two-year and four-year colleges were doing a good job in adequately preparing students for employment. Moreover, a majority of the survey respondents felt that colleges needed to improve the curricula to better prepare students for employment. As noted by Cranmer (2010), employer input into course design has shown to positively impact employability outcomes.

In the 2013 Gallup poll mentioned above, there was some indication on how employers believed institutions of higher education could improve student employability. According to Fischer (2013), employers want new graduates to have "real-world experience" and that "internships and work during college matter most." In all eight fields (science/technology, service/retail, media/communications, government/nonprofit, business, healthcare, manufacturing, and education) queried by the Gallup poll, employers overwhelmingly preferred experience to academic record. These survey results coincided with a sizable and growing body of research supporting the inclusion of internships or work experience in college curriculums (Coco 2000; Cranmer 2006; Eyler 2009; Gault, Redington & Schlager 2016; Knouse & Fontenot 2008). According to Eyler (2009), experiential education is essential as it "helps students both to bridge classroom study and life in the world and transforms inert knowledge into knowledge-in-use" (p. 24).

If greater emphasis is to be placed on employability after graduation, it seems institutions of higher education would be well served to focus their attention on providing additional experiential learning opportunities. There are current examples, such as Penn State's Berkey Creamery and Georgetown University's Alumni and Student Federal Credit Union, who have successfully linked the knowledge learned in a traditional classroom setting to providing practical work experiences. Institutions of higher education are continuing to find innovative ways, such as these, to increase student readiness and employability across disciplines.

In the case of Penn State's Berkey Creamery and in Cal Poly Pomona's Innovation Brew Works, an experiential learning opportunity can double as an

opportunity to diversify revenue streams for universities. According to Mitchell, Leachman, Masterson & the Center on Budget and Policy Priorities (2017), funding for higher education in the 2017 school year was over $8 billion below its 2008 level, after adjusting for inflation. According to Mitchell et al. (2017), "The funding decline has contributed to higher tuition and reduced quality on campuses as colleges have had to balance budgets by reducing faculty, limiting course offerings, and in some cases closing campuses" (para. 1). Clearly, an argument can be made for evaluating opportunities for creating additional revenue streams, especially when they directly align with higher education's mission of education.

With their decision to create Innovation Brew Works, Cal Poly Pomona took a novel approach to expand on-campus experiential learning opportunities while potentially diversifying revenue streams, bringing campus and community together, and adding an amenity to the campus to attract and retain students.

Significance of the Problem

The significance of the problem is threefold: competition for students is fierce; universities need to consider ethical principles in decision making and when investing in infrastructure; and universities need to be return on investment focused.

As described earlier, universities are desperately searching for ways to distinguish themselves from their colleagues. While the focus has long been on academic and athletic facilities, universities are now looking at alternative amenities to attract and retain students. The proposed research highlights a novel amenity to the campus environment: a university owned brewery and brewpub.

Second, Cal Poly Pomona's Innovation Brew Works provides an opportunity to understand the ethical considerations and decision making process when investing in a university's infrastructure. As highlighted earlier, student alcohol use is negatively associated with both student behavior and academic performance. In bringing a university owned brewery and brewpub on campus, Cal Poly Pomona needed to illustrate that the benefits to students outweighed the potential harm.

Third, if higher education intends to be student-centered, universities need to focus on a student's return on investment. Institutions of higher education must respond to a student's desire for gainful employment upon graduation. The brewery and brewpub can serves as a catalyst for a myriad of experiential learning opportunities across many disciplines. An operational brewery and brewpub, Cal Poly Pomona has the potential to offer students experience in disciplines including brewing science, hospitality management, agriculture, business, chemistry, fine arts, culinary arts, marketing and advertising.

Theory, Policy and Practice

Kolb's Theory on Experiential Learning serves as the framework for this study. According to Kolb (1984):

> Learning is defined as the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience. Grasping experience refers to the process of taking in information, and transforming experience is how individuals interpret and act on that information. (p. 49)

Experiential learning is described as the "sort of learning undertaken by students who are given a chance to acquire and apply knowledge, skills and feelings in an immediate and relevant setting" (Smith, 2010, para. 2). Kolb illustrates experiential learning theory through a four-stage learning cycle. According to Kolb (1999):

> Immediate or concrete experiences are the basis for observations and reflections. These reflections are assimilated and distilled into abstract concepts from which new implications for action can be drawn. These implications can be actively tested and serve as guides in creating new experiences. (p. 3)

As Smith (2010) points out, two aspects of this theory are particularly noteworthy, "the use of concrete, here-and-now experience to test ideas; and the use of feedback to change practices and theories" (para. 12).

Kolb's theory can be helpful in understanding both Cal Poly Pomona's ethical decision-making process and how the brewery and brewpub can contribute to the university's academic mission. First, Kolb's theory is helpful in understanding the ethical decision making process in a university setting, where experiences are dissected, reflected upon, and used to create or improve future processes and experiences. Second, Kolb's theory can help illustrate how a university-owned brewery and brewpub provides practical experiences for students, incorporating multiple disciplines. If researchers are able to show that university owned breweries can positively impact employability while abiding by ethical principles for student affairs, universities may be more apt to consider them as viable options moving forward. The student benefit, coupled with an opportunity for diversification of revenue streams for the university, makes a pairing universities would be hard-pressed to ignore.

Research Question

What can be learned from the country's first university owned brewery and brewpub?

The following are related sub questions:

- Given the documented negative consequences of drinking alcohol on college campuses, how was the decision reached to create an on-campus brewery and brewpub?
- What role, if any, did ethical considerations have in the discussion to create an on-campus brewery and brewpub?
- How has the brewery and brewpub contributed to the on-campus environment?
- How has the brewery and brewpub contributed to the academic environment and employability of students?

Data Collection/Procedures

For the purpose of this qualitative research study, I utilized the case study methodology, researching Cal Poly Pomona's Innovation Brew Works. The case study methodology seemed appropriate based on Bromley's (1986) description of when to use a case study. According to Bromley (1986), "All case study research starts from the same compelling feature: the desire to derive a(n) (up-)close or otherwise in-depth understanding of a single or small number of "cases," set in their real world context" (p. 1). Similarly, Yin (2012) notes that a case study is used when the researcher wants to study a phenomenon within its real-world context or when a study favors the collection of data in natural settings.

Qualitative data was collected in several of ways. First, I conducted on-campus interviews with representatives from Cal Poly Pomona. For the interviews, three groups of individuals served as data points: administrators, students (current and past), and faculty. Questions for administrators focused on the decision-making process to create Innovation Brew Works (from information gathering to implementation) and how the brewery and brewpub has impacted the campus environment. Questions for current and past students centered on the following:

- How/if Innovation Brew Works has provided an avenue for practical experience.
- How/if that experience has prepared them for employment.
- How/if that experience has impacted their understanding of workplace expectations.
- How/if that experience has impacted their understanding of interdisciplinary learning.
- Any other notable impacts Innovation Brew Works has had on the campus community.

Secondly, I used observation at the brewery and brewpub to see the process of experiential learning in action. Here, I gained a better understanding of the relationship between Innovations Brew Works, the campus and the greater Pomona community. Additionally, I saw firsthand the experiential learning opportunities available and the interaction between student workers and the business environment. Third, I used document analysis as part of the data collection process. Here, I reviewed the Innovation Brew Works and Cal Poly Pomona websites, Cal Poly Pomona's Campus Security

Report, Innovation Brew Works promotional materials, and Cal Poly Pomona Board of Directors' meeting minutes.

Data Analysis Procedures

Following the field interviews, I transcribed the interviews and then began the process of classifying and interpreting the transcripts into codes, categories and themes. As described in Creswell (2013), the process of coding involves "aggregating the text or visual data into small categories of information, seeking evidence for the code from different databases being used in a study, and then assigning a label to the code" (p. 184). In the next level, themes are developed; these are "broad units of information that consist of several codes aggregated to form a common idea" (Creswell, 2013, p. 186). Following the process of creating codes and themes, I moved to validate the findings. To validate findings, I employed member checking. As described by Creswell (2013), "In member checking, the researcher solicits participants' view of the credibility of the findings and interpretations" (p. 252). I sent the fourth chapter, which contained the quotes and themes of this dissertation, to the interviewees so they had the opportunity to "judge the accuracy and credibility of the account" (Creswell, 2013, p. 252).

Second, I used direct observation in studying Innovation Brew Works. Marshall and Rossman (1989) defined observation as the "systematic description of events, behaviors, and artifacts in the social setting chosen for study" (p. 79). Here, I spent time in the brewery's natural setting and took field notes which added richness to the narrative developed.

Third, I used document analysis in studying Innovation Brew Works. During the process of document analysis I reviewed: Board of Trustees meeting minutes; the

Innovation Brew Works website; the Cal Poly Pomona main website; the College of the Extended University and the Collins College of Hospitality Management websites; the most recent Cal Poly Pomona Campus Security Report; and Innovation Brew Works marketing and promotional materials during my site visit. Similar to the observation data collection method, I used notes and findings to add richness to the interview data.

Contribution to the Literature

The proposed research contributes to the literature in several ways. First, the research highlighted and described what can be learned from the country's first university owned brewery and brewpub. Conducted as a case study, this research provides a rich account of this novel university amenity.

Second, the proposed research provides an understanding of the ethical decision-making process in higher education. Specifically, the research highlights discussions, thought processes, and the subsequent implementation of a campus amenity that had the potential to be controversial given the challenges universities face with alcohol use on campus.

Third, the proposed research highlights the need for universities to focus on the employability of its students. As mentioned earlier, students are becoming increasingly concerned with the return on investment of higher education. According to the National Center for Education Statistics (2016), the cost of undergraduate education rose 33 percent in the public sector between the 2005 and 2015 academic years and 26 percent in the private non-profit sector (inflation adjusted). Moreover, according to the Pew Research Center (2017), 37% of adults' ages 18 to 29 currently have student loan debt and that the median loan debt owed was $17,000. Despite those concerning statistics,

students seem willing to invest in higher education if it leads to a good job upon graduation. With that in mind, universities need focus their attention on preparing students for employment. As noted by current employer surveys, current university efforts are inadequate. These results consistently show that employers want greater focus on practical work experiences for university students. The proposed study examines a novel approach to providing students with experiential learning opportunities through the creation of a university-owned brewery and brewpub. In addition, this case study examines the brewery and brewpub's opportunities for interdisciplinary experiential learning, which may also enhance work readiness and graduate employability.

Assumptions

Due to my research and my experience working in higher education, I assumed recruitment and retention of students is an important factor for institutions of higher education to consider. Additionally, I assumed, to some extent, that facilities impact a student's decision to attend and persist at a certain school. I assumed that I would be able to interview the groups of individuals (students, administrators, and faculty) needed to research this study adequately. I assumed that all interview participants would be truthful, honest, and comprehensive (to the best of their ability) in their responses to the interview questions.

Limitations

Given that this dissertation is a single case, qualitative study, it is not very generalizable to other institutions. The results of this dissertation may provide insight to how a brewery or brewpub could be created or received on another college campus.

However, any assumption that this dissertation would provide anything more than insight would be irresponsible. This study could, however, be replicated at other sites.

Another limitation to this dissertation study was not having access to Innovation Brew Works' specific financial data. While I was able to review Foundation Financial Reports, none of the reports were specific enough to highlight Innovation Brew Works itself. Instead, I was able to see a higher organizational budgetary level, Dining Services, which included Innovation Brew Works.

A third limitation is that I was not able to utilize employers as a data point for interviews. I likely could have talked to employers of past students, but they would not have been remotely randomized. Instead, it would have likely been employers that have had significant experience with Cal Poly Pomona students. This would not have provided a representative sample of employer experiences.

A fourth limitation relates to the composition of the interview pool. While I was able to capture the student perspective through past students, I was unable to use data for current students. I had two interviews that were conducted at Cal Poly Pomona with current students that were not audible upon attempts to transcribe. The content of the interviews, however, were consistent with past student perspectives.

Lastly, there are certain limitations inherent in qualitative methodology. Specifically, there may be concerns of the validity of data or inherent biases in the data collection and data analysis stage.

Conclusion

The competition to recruit and retain students is fierce. As such, universities are constantly looking for ways to separate themselves from their peers and improve the

student experience. At first glance, a university-owned brewery and brewpub may sound like a gimmick. However, if it proves to be desirable to students and an amenity that contributes to the educational mission, Cal Poly Pomona may have been first to market.

Chapter Two

Literature Review

Introduction

Chapter 2 begins with an overview of the relationship between alcohol, college students, and college campuses and explores the impact of alcohol on the student, the campus environment, and trends in marketing and availability of alcohol on college campuses. The next section highlights the competitive forces in student recruitment, the facility/amenity "arms race" in higher education, and the responsibility for ethical decision-making in Student Affairs. Next, I will provide a foundation for understanding the value of experiential learning, interdisciplinary learning, and a broad understanding of Kolb's theory, which connects experience to knowledge and learning. Through an analysis of research on internships, I identify student benefits, employer benefits, higher education benefits, and ways to ensure successful internships. Additionally, I begin to understand how internships ease the transition from the classroom to the workplace. Next, I explore the concept of interdisciplinary learning, its benefits, and avenues to ensure successful integration into curriculums and conclude with research on how brewing science programs have provided practical experience historically.

Alcohol Use on College Campuses

As mentioned previously, the relationship between alcohol and higher education is a complicated one. While drinking at college has become a ritual of the higher education experience, the statistics relating to alcohol use on college campuses are staggering. According to Hingson et al. (2009), Approximately 1,825 college students between the ages of 18 and 24 die from alcohol related injuries, including motor vehicles

accidents each year. Another 696,000 students between the ages of 18 and 24 report being assaulted by another student who has been drinking and approximately 97,000 students report experiencing alcohol-related sexual assault or date rape (Hingson, 2005).

A national survey conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA) found that almost 60 percent of college students ages 18-22 drank alcohol in the past month and almost 2 out of 3 engaged in binge drinking during that same time frame (2014 & 2014). Similarly, in their 2016 Monitoring the Future Study, Schulenberg, Johnston, O'Malley, Bachman, Miech & Patrick (2017) found that 81% of college students had tried alcohol at least once in their lifetime and 67% reported that they had been drunk. Additionally, Schulenberg et al. (2017) found that 32% of college students reported binge-drinking behaviors. Even more concerning, according to Blanco, Okuda & Wright (2008), is that about 20 percent of college students meet the criteria for an alcohol use disorder. Criteria for alcohol use disorder is defined in the American Psychiatric Association's 5th edition of the Diagnostic Manual of Mental Disorders (DSM-5). These results seem amplified in Fuertes & Hoffman's 2016 study which explored alcohol consumption as a function of membership in various campus groups. According to this study, 68 percent of students surveyed experienced a problem with alcohol dependence, alcohol abuse, or problematic drinking.

Factors Contributing to Alcohol Use and Impact on Students

According to the NIAAA, there are a number of factors affecting students drinking habits. Specifically, the NIAAA (2015) notes that "certain aspects of college life, such as unstructured time, the widespread availability of alcohol, inconsistent enforcement of underage drinking laws, and limited interactions with parents and other adults, can

intensify the problem" (p. 2). Additionally, the NIAAA notes environmental factors, such as Greek affiliation, living arrangements, and athletics, also influenced the rate of drinking on college campuses. Similarly, Sheppard (2016) found Greek involvement to be a significant predictor in alcohol use among undergraduate college students. The NIAAA also notes that alcohol consumption is highest among students living in fraternities and sororities and lowest among commuting students who live with their families. Apoorva, Pillai, Navanar, Chopra, Suresh, Balika, Shaffi, Harikrishnan, Kundapur, and Ravi (2014), found that more than 55 percent of their study sample consumed alcohol due to peer pressure, academic stress, and emotional stress. Furthermore, Sheppard (2016) noted that personal attitudes, descriptive norms of alcohol-related problems, and gender are also predictors in alcohol use among students.

In their 2017 study, Wrye and Pruitt (2017) provided a psychological perspective to explain the reasons students engage in binge drinking behaviors. According to Wrye and Pruitt (2017):

> [Drinking alcohol] is commonly an accepted, and by many, an expected behavior. This cultural norm leads to an increase in students participating in these activities in order to fit in, meet expectations, or cope with the stressors of college in a way that is socially acceptable within the context of their immediate environment. Students indicated that those who perceive that their peers are partaking in binge drinking activities for these reasons may alter their behaviors and beliefs to match their friends. (p. 83)

According to Leavens, Leffingwell, Miller, Brett and Lombardi (2016), consequences related to overconsumption may lose their impact over time. They suggest that "college

students may become desensitized to alcohol-related consequences, and these effects may be particularly pronounced among men and heavy-drinking young adults" (Leavens et al., 2016, p. 248). Similarly, Abar, Mallett, Turrisi, and Abar (2014) found that consequences for overconsumption are not an effective deterrent in curbing dangerous drinking, but in fact, the opposite was often observed. Interestingly, Wrye & Pruitt (2017) also found that students perceived that their peers consumed more alcohol than they did. Here, Wrye & Pruitt (2017) argue that this could be the reason students do not see their drinking as problematic. As they note:

> Many students perceived that the drinking patterns of their peers were more extreme than their own, which may have lead them to justify their own actions and alcohol consumption; an illustration of the moral disengagement in action through the mechanism of advantageous comparison. (Wrye & Pruitt, 2017, p. 83)

The impact of alcohol use on student performance has also been well established in the literature. According to Wechsler, Dowdall, Maenner, Gledhill-Hoyt, & Lee (1998), about 1 in 4 college students report academic consequences from drinking, including missing class, falling behind in class, doing poorly on exams or papers, and receiving lower grades overall. Moreover, according to Thombs, Olds, & Bondy (2009), binge drinkers who consumed alcohol at least 3 times per week were roughly 6 times more likely than those who drank but never binged to perform poorly on a test (40 percent versus 7 percent) and 5 times more likely to have missed a class (64 percent versus 12 percent).

Increases in Alcohol Availability and Impact on College Campuses

Research has consistently shown that availability of alcohol directly influences consumption and alcohol-related problems (Guenewald & Millar, 1993 & Kuo, Wechsler,

Greenberg, & Lee 2003). In their 2003 study, Kuo et al. looked at the effects of environmental factors on students' drinking. Here, they found that the environmental factors (availability, sales prices, promotions, and advertising) were directly correlated with higher binge drinking rates on college campuses. Similarly, Sheehan, Lau-Barraco, and Linden's (2013) research found that college student drinking was influenced by the social environment, such that "heavy drinking increases as the availability of alcohol, offers of alcohol, and drinking occurring near student housing increases" (p. 449). Moreover, environmental factors were directly associated with the number of drinks consumed by students within the past 30 days. This expanded on earlier research done by Gruenewald & Millar (1993) which found that physical availability directly influenced the rates of alcohol consumption and related problems. Both of these studies support the view that controlling the physical availability of alcohol may be beneficial for college campuses.

However, despite research on environmental factors, there has actually been an increase in the availability of alcohol on college campuses. As noted by Voas, Johnson, Turrisi, Taylor, Honts, and Nelson (2008), there has been a "countervailing trend to increase the events, if not the venues, where alcohol can be sold to raise revenues for campus programs and athletic teams" (p. 2). Furthermore, they argue that "increasing financial pressures provides an incentive for colleges and universities that have traditionally banned alcohol to allow alcohol sales as a part of an overall effort to improve services" (Voas et al., 2008, p. 2). Increased alcohol availability at college athletic events highlights this pressure well. One strategy to combat six straight years of football attendance declines has been to offer alcohol at games. As a result, more than one-third of all Division I FBS schools now sell beer at their football games (Nietzel, 2018). As Smith

and Lefton (2017) note, “Selling beer in-venue is considered by many administrators as a way of providing a better fan experience, or at least an experience that will keep them inside the stadium longer” (para. 13).

Strategies to Improve Alcohol Use Trends

While higher education institutions continue to struggle with alcohol use on college campuses, there are some promising strategies for improving the campus environment. The Pacific Institute for Research and Evaluation (2011) suggested the following strategies:

1. Notify parents of alcohol-related violations committed by students under the legal drinking age of 21.
2. Provide alcohol-free leisure activities by establishing “dry” cafes and coffeehouses, keeping recreational facilities open during times when students say there is nothing to do, and replacing alcohol-involved social traditions with new ones that are alcohol free.
3. Restrict marketing activities of the alcohol industry on campus, including paid advertising, promotions, paid student-campus representatives, and sponsorship of educational, cultural, and sports programs.
4. Create shifts in social norms through the communication of faculty and administrators, mass media messages, and the application of social marketing techniques.
5. Provide substance-free housing options.
6. Foster positive changes in campus Greek organizations, including changes in the way alcohol is purchased and served at fraternity parties.

The above strategies are supported by a number of organizations and research. Additionally, research has shown that the type of messaging used in regards to alcohol can be a powerful tool in curbing problematic drinking habits. In their 2016 study, Glassman, Kruger, Paprzycki, Blavos, Hutzelman, and Diehr studied which prevention message (abstinence, social norms, or responsible drinking) was most effective at reducing alcohol consumption. While all messaging was found to be beneficial, the abstinence message proved to the most effective. According to Glassman et al. (2016), this was somewhat surprising. As they note, "Many practitioners have been reluctant to promote abstinence messages, even to underage students, assuming the recommendation is not realistic and would thus alienate their audience" (Glassman et al, 2016, p. 79).

Student Competition, Recruitment & Retention

Despite the challenging relationship between alcohol and higher education, Cal Poly Pomona decided to create a university-owned brewery and brewpub on campus. Why? Some may argue that it is related to the fierce competition for students.

Recruiting students is costly and competitive. According to Ruffalo Noel Levtiz (2018), it costs approximately $2,357 to recruit a single student to a private institution and approximately $536 for public institutions. In other words, four-year private institutions spend three times more than four-year public institutions to recruit a single student. In their 2017 survey of college and university admissions directors, Jaschik & Lederman found significant concerns related to enrollment goals. As noted, a majority of admissions directors said they were concerned about meeting their enrollment goals for the coming academic year and only a third reached their most recent enrollment goals by the traditional May 1 deadline. Part of the problem, according to Hoxby (2009), relates to the selectivity

of colleges. In her 2009 study, Hoxby found that only 10 percent of colleges are more selective than they were in 1962, while 50 percent of colleges were found to be substantially less selective. Because selectivity has largely decreased, pressure for students has increased downstream. As Jacob, McCall, & Stange (2011) note, "increased market pressure has caused colleges to cater to students' desires for leisure" (p. 2).

Facilities Arms Race

Testifying before the US Senate in 2013, University of Wisconsin Professor Sara Golrick-Rab described college campuses as "glorified summer camps" and that administrators were "engaging in an arms race to have the most impressive bells and whistles" (Robinson, 2017, para. 1). And while this argument may be somewhat sensationalized, research has shown a significant increase in spending on student services and amenities. As noted by the Delta Cost Project's 2010 report, spending on student services outpaced instruction for the past decade for all postsecondary sectors. Additionally, spending declined against increased spending on academic support (libraries and computing) and institutional support (administration).

While the trend in spending less on the academic mission is concerning, it seems as though universities are simply responding to market demands. In their 2011 study, Jacob, McCall, & Stange studied the importance of university consumption attributes in schooling decisions and the implications for university strategic decision making. In their paper, Jacob et al. (2011) define consumption attributes as those whose "benefits arguably accrue only while actually enrolled" (p. 4). Jacob et al. (2011) found that college spending on student activities, sports and dormitories are significant predictors of college choice and more influential than instructional spending or academic support. In fact, they estimate that

"students would be willing to pay 7 percent more to attend a school that spends 100 percent more on students and auxiliary services but are unwilling to spend more to attend a college that spends more on instruction (in fact the point estimate is negative)" (Jacob et al., 2011, p. 4). For less selective schools, Jacob et al. (2011) contends that schools will actually harm enrollment by improving academic quality. In their 2013 study, Jacob, McCall & Stange expound on this relationship even further. Here, they conclude:

> More selective schools have a much greater incentive to improve academic quality since this is the dimension most valued by its marginal students. Less selective schools (particularly privates), by comparison, have a greater incentive to focus on consumption amenities since this is what their marginal students value. In fact, our estimates suggest that less selective schools will actually harm enrollment by spending more on instruction. (Jacob et al., 2013, p. 37)

The aforementioned studies built on earlier works by Haley (2008) and Reynolds (2007). In his 2008 study, Haley found a significant correlation between faculty recruitment and retention and the quality of facilities. Similarly, Reynolds (2007) found that facilities directly influenced a student's decision, both initially and after enrollment. In his survey, two-thirds of respondents indicated that the overall quality of the campus facilities was "essential" or "very important," while half the respondents indicated that the attractiveness of the campus was "essential" or "very important" to their decision to choose a college (Reynolds, 2007, p. 64). While most research did point to facilities and amenities being a significant factor in which college to choose, Price, Matzdorf, Smith, & Agahi (2003) actually found facilities to be relatively low on the list for reasons to choose a

university. Here, categories including course/subject, reputation, proximity to home, and location all scored higher as predictors in college choice.

In addition to being a factor in choosing a college, research has also shown that increased expenditures in the areas of facilities and amenities could positively impact graduation and persistence rates. In their 2010 study, Webber and Ehrenberg studied whether various non-instructional categories of expenditures directly influenced graduation and persistence rates. Here, researchers found that "reallocating some funds from instructional expenditures to student service expenditures would enhance graduation and persistence rates" (Webber & Ehrenberg, 2010, p. 956).

Ethical Decision Making on College Campuses

Given the challenging relationship between alcohol and higher education, institutional administrators should consider the ethical ramifications of their decisions. In her seminal article, "Ethical Principles and Ethical Decisions in Student Affairs," Kitchener (1985) outlines five principles to consider during the decision making process. These principles include respecting autonomy, doing no harm, benefiting others, being just, and being faithful. The principle of respecting autonomy states that "individuals have the right to decide how to live their lives, as long as their actions do not interfere with the welfare of others" (p. 20). For the principle of doing no harm, individuals need to abstain from activities that present a high risk of harming others. According to Kitchener (1985), this should include psychological harm, as actions may have "long-term negative consequences on an individual's self-worth and on his or her opportunities for advancement" (p. 22). The principle of benefiting others suggests that student services "exists to aid students in their intellectual, moral and personal development" (p. 22).

Here, Kitchener (1985) argues that it is "necessary to weigh doing no harm to a particular individual or a group of individuals against benefiting others or the institution as a whole" (p. 22). The principle of being just essentially refers to being fair. As Kichener (1985) states, "because goods and services are not always plentiful and because filling the needs of one group of individuals may mean reducing or limiting what another group receives, ways must be identified to distribute resources fairly" (p. 24).

Several articles related to ethical decision making by past and current university presidents tie ethical decision making back to the university's mission. As Bornstein (2009) describes:

> When facing an ethical dilemma, I asked myself the following questions: Which course of action is consistent with the college's culture, policies, and prior decisions, professional standards and my personal values? Will that action have a positive impact on the college? Finally, will it serve as an appropriate template for future actions? (p. 1).

Similarly, Mitchell (2012) and Trent & Pollard (2019) also advocate for tying decision making back to the university's mission. Trent and Pollard (2019) highlight this well, quoting a former college president who stated, "Keep it simple. Keep it honest. Keep it focused on what is the mission; and where do we spend our money? We spend our money on our mission" (p. 70).

In order to justify its place on a college campus, Cal Poly Pomona needed to consider these principles while tying into the university's academic mission. Moreover, Cal Poly Pomona needed to weigh the benefits to others against the risk of jeopardizing autonomy and doing no harm. To do this, Cal Poly Pomona tapped into an essential

component of the student experience: providing practical learning experiences to enhance employability and work readiness.

Theoretical Framework: Kolb's Theory on Experiential Learning

Kolb's Theory on Experiential Learning serves as the framework for understanding, explaining and analyzing the benefits of practical experiences as part of a university curriculum. According to Kolb (1984), "Learning is defined as the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience. Grasping experience refers to the process of taking in information, and transforming experience is how individuals interpret and act on that information" (p. 49).

According to Kolb (1984), experiential learning highlights the relationship between education, work, and personal development. Moreover, Kolb (2015) suggests that experiential learning "pictures the workplace as a learning environment that can enhance and supplement formal education and can foster personal development through meaningful work and career-development opportunities" (p. 4). In simplest form, Kolb (1984) defines experiential learning as the "process whereby knowledge is created through the transformation of experience" (p. 49).

To illustrate the experiential learning process, Kolb utilizes a four-stage learning cycle. According to Kolb (1999), "immediate or concrete experiences are the basis for observations and reflections. These reflections are assimilated and distilled into abstract concepts from which new implications for action can be drawn. These implications can be actively tested and serve as guides in creating new experiences" (p. 3). More specifically, Kolb (2015) describes the process as follows:

> The experiential learning theory model portrays two dialectically related modes of grasping experience-Concrete Experience (CE) and Abstract Conceptualization (AC)-and two dialectically related modes of transforming experience-Reflective Observation (RO) and Active Experimentation (AE). Learning arises from the resolution of creative tension among these four learning modes. This process is portrayed as an idealized learning cycle or spiral where the learner 'touches all the bases'-experiencing (CE), reflecting (RO), thinking (AC), and acting (AE)-in a recursive process that is sensitive to the learning situation and what is being learning. Immediate or concrete experiences are the basis for observations and reflections (p. 56).

Experiential Education

Experiential education, as defined by Itin (1999), is a "holistic philosophy, where carefully chosen experiences supported by reflection, critical analysis, and synthesis, are structured to require the learner to take initiative, make decisions, and be accountable for the results, through actively posing questions, investigating, experimenting, being curious, solving problems, assuming responsibility, being creative, constructing meaning, and integrating previously developed knowledge" (p. 93).

Kuh (2011) consistently notes the importance of out-of-class experiences in both student learning and development. According to Kuh (2011), out of classroom experience provides an opportunity for synthesizing and integrating classroom material into a real world context. Moreover, Kuh (2011) notes that "students benefit in many ways from out-of-class experiences, ranging from gains in critical thinking to relational and

organizational skills, attributes that are highly correlated with satisfaction and success after college" (p. 146).

Research suggests that employers value practical work experience. As Berry (2009) eloquently describes, "Corporations want courses that offer experiential content and not just content for the sake of content" (p. 58). Additionally, students value the opportunities for practical experience provided by higher education institutions. In a survey completed by Barnwell (2016), 90% of respondents believed that students should participate in an internship prior to graduation. Moreover, according to survey results of 6,200 traditional-age college freshman, the three most significant factors in conveying a commitment to students include: opportunities a college provides for internships; the quality of its career office; and its job-placement rate (Farrell 2007). As Rae (2007) suggests, "there is a growing realization that 'finding a job', becoming employable, and starting a career are important considerations in their choice of institution and course" (p. 609).

Transition from Academic to Work Environment

In her 2006 study, Cranmer found that the knowledge acquired in higher education did not align well with the skills needed for employment. For a successful transition from the academic to work environment, institutions of higher education needed to involve the associated stakeholders in curriculum development. Cranmer (2006) argued, therefore, for employer involvement in curriculum design as her findings demonstrated an improvement in employment outcomes as a result. Similarly, Chen, Hsu, & Wu (2009) found a positive correlation between student participation in curriculum development and their level of engagement. Moreover, they stated that students "seem to

be more responsible for their learning if they are allowed some decision making in terms of the courses they take" (p. 172).

Gault, Redington & Schlager (2016) found that internship experience better prepared graduates for entering the workforce. Moreover, Sykes (2016) found that internship experience led to a smoother and less stressful transition to the workforce and provided a less threatening or competitive entrance into the workplace. This, Sykes (2016) argued, led those with internship experience to have "better relationships with co-workers" (p. 103). This built on earlier findings by Coco (2000), who suggested internship experience would lessen the "shock" of entering the workplace. While the majority of research findings highlight internships as easing the transition to employment, Richard (1984) notes that a transition period for students entering the workforce still exists.

To help in the transition from an academic to a work environment, it is helpful to understand the desired skillset. Andrews & Higson (2008) defined core components of employability as hard business-related knowledge and skills, soft business-related skills and competencies, and prior work experience. Expanding on this list, Frawley & Litchfield (2009) identified eight key employability skills, which included: communication, teamwork, planning and organizing, technology, problem-solving, self-management, lifelong learning, and initiative and enterprise.

Internship Student Benefits

Barnwell's 2016 study found that two-thirds of survey respondents believed that internships paved the way to securing employment after graduation. These results supported earlier research conducted by Gault, Leach & Duey (2010), Rothman & Lampe

(2009), and Hite & Bellizzi (1986) who also found internships as a marketable experience in securing employment. A later study conducted by Gault et al. (2016) found that job seekers with internship experience were able to secure employment more quickly than non-interns. This somewhat contradicts earlier research done by Pasewark, Strawser & Wilkerson (1999), who found that previous internship experience did not provide an advantage in the interview process. However, while their research suggests internship experience did not help them perform better in an interview, their findings did find a correlation between internship experience and the likelihood of securing an off-campus interview. Moreover, Divine, Linrud, Miller, & Wilson (2015) suggest that the mere presence of the internship experience on a resume helps secure employment.

Callanan and Benzing (2004) found that internship experience heavily influenced the ability to obtain a career-oriented position. Once established in a position, research has shown impact in upward mobility because of internship experience. According to D'Abate (2010), those with internship experience benefited from faster promotion rates. Additionally, Gault et al. (2010) and Gault et al. (2016) found that those with internship experience were more likely to receive higher starting salaries.

In Barnwell's (2016) study mentioned above, 50% of survey respondents noted that internship experience improved their ability to solve technical problems. In addition to improving technical skills, research findings have also shown an improvement in personal characteristics. For instance, according to Short (2013), internship experience had a positive impact on student self-confidence. Additionally, Moghaddam (2014) found an improvement in personal and business values as a result of internship experience.

Research done by Andrews & Higson (2008) focused on internships as a means of developing 'soft skills.' As they note, "High levels of business knowledge by itself is insufficient, excellent verbal skills are also necessary in order that graduates feel confident in their abilities to communicate such knowledge" (p. 419). Similarly, Short (2013) found that 45% of students with internship experience listed communication as a strength, while only 14 percent of those with no internship experience listed communication as a strength. Building on this framework, Berry (2009) argued that employers valued teamwork and personnel that could utilize their interpersonal skills to cohabitate peacefully in the work environment. Cook, Parker & Pettijohn similarly noted areas of personal growth due to internship experience. In their 10-year longitudinal study, they note the importance of internships in helping to develop maturity and people skills.

According to D'Abate (2010) and Gault et al. (2016), internship experience leads to greater job satisfaction. Similarly, Sykes (2016), Trede & McEwen (2015), and Harris (2016) found that internships allowed students to discover and clarify if a career track was a good fit. However, these results contradict Callanan and Benzing's (2004) earlier findings, which showed no correlation between internship experience and a compatible employment fit.

Cook, Parker, & Pettijohn's (2004) 10-year longitudinal study on interns highlights areas of personal growth for interns. In their 2004 study, they note that internships helped students gain maturity and develop their people skills,

Internship Employer Advantages

Coco (2000) highlights access to an inexpensive and motivated pool of employees as a major benefit of employing interns. Additionally, as the article's title states, the

internship opportunity presents a “try before you buy” opportunity for employers (Coco, 2000). During this time, employers have the opportunity to evaluate whether a candidate has the needed technical skills and personal attributes to secure permanent employment. Similarly, Degravel (2011) notes being able to “test” potential employees in a work situation as a valuable component of the internship experience.

According to Sykes (2016), employers benefit from students gaining practical experience. Specifically, Sykes (2016) found that students with internship experience were more likely to have the skills needed to add immediate value to their organization and that they required less training. And while the internship provides students with practical experience, Coco (2000) argues that interns can provide permanent employees with relief from routine tasks. This seems to present a “win-win” situation for both permanent and intern employees.

Degravel (2011), who approached the use of interns from a small business perspective, outlines some valuable factors he believes as being unique to intern involvement. These factors include:

- Overcoming the lack of resources, in terms of time, of available human resources and associated skills;
- Overcoming the lack of critical capabilities (management of people, development of business, strategizing, and adaptation and change;
- Fighting the ‘groupthink risk,’ through a fresh external vision and the absence of taboo for questioning the firm’s strategy and practices;

- Fighting the risk of failure posed by the structure of the product-market portfolio, decision-making processes, and resources, by providing relevant diagnosis and questioning of managerial and strategic practice;
- Providing valuable improvements in many ways, especially strategy change management, and forecasting (Degravel, 2011, p. 32).

Hite & Bellizzi (1986) found that the paid internship experiences yielded greater results for employers. Their findings indicated that internship compensation ensured meaningful utilization of students' talents. While employers found that compensation influenced their return on investment, later research findings by Paulins (2008) found that compensation levels did not negatively impact intern satisfaction or whether they would recommend the experience to others.

Institution of Higher Learning Benefits

Research has consistently shown classroom benefits as a result of internships. Weible & McClure (2011) found that internships improved classroom discussions. Additionally, they found that there was more open discussion and a noticeable connection between course materials and employment experience. This supported earlier research done by Cook et al. (2004) which found that internships helped relate classroom theories to the workplace.

According to results of a questionnaire given to students, universities and participating employers by Alpert, Heaney & Kuhn (2009), internships are essential in helping to develop and cultivate relationships between business and universities.

Research by Trede & McEwen (2015) found that internships positively influence student persistence and retention. While these types of experiences are not typically

provided in earlier years of study, their research highlighted how early experiences could help students stay focused and put their academic work into perspective. As Trede & McEwen (2015) articulately stated, "The curricular significance of early placement experiences include a richer pedagogical repertoire and more balanced approach between academic learning and hands on practice, early exposure to ethical, cultural and political issues in professional practice and a stronger focus on practice and inquiry-based education that nurtures deliberate, lifelong learners" (p. 30).

In a study focused on assessing student perceived value of internships, Hergert (2009) found that student motivation and level of interest were significantly higher in an internship setting than for a traditional course. Additionally, students reported higher career and practical value for internships compared to traditional classes.

Improving Internships and Potential Pitfalls

While most of the available literature identifies the benefits of including an internship or practical work experience in higher education curriculum, there are research findings suggesting ways to ensure greater success. Knouse & Fontenot (2008) offer a list of ways to improve internships including: active student participation; active employer participation; setting clear expectations; building mentorships in the program; and having interns keep a journal. Similarly, Narayanan, Olk & Fukami (2010) note components for both students and the university to make the internship experience more effective. For students, they suggest active participation in the creation of the internship experience. On the university side, their findings support focusing on providing students with an advisor, functional knowledge, and a project with a focused scope. Adding to that list, Carson

(2013) suggests determining workplace capacity, forming realistic expectations, and creating objectives and ground rules.

Lord, Sumrall, & Sambandam (2011) note the importance of "fit" in creating a successful internship experience. Their post-internships evaluation findings indicate that success can largely be determined by the matching of skills to tasks to be completed and an opportunity to apply skills learned in the classroom. Further, they note that students want to be able to express opinions and have the opportunity and time to complete tasks. Paulins (2008) suggests that the best way to accomplish this is to have students participate in internships that allow a balance between independent and collaborative work.

While Narayanan et al. (2010) notes the importance of providing a project with a focused scope, Paulins (2008) suggests that interns should be able to identify their projects as part of the larger mission of the organization. This, Paulins (2008) notes, will help with intern satisfaction and recommending the internships experience.

Coco (2000) notes the importance of treating interns similar to other permanent employees. Here, Coco (2000) recommends that interns "should be held accountable for projects and deadlines," should be invited to staff meetings, and should be explained the "rationale behind work assignments" (p. 43).

One of the major challenges for ensuring that interns and employers are satisfied with the experience relates to the mismatch in expectations for internships. Hall, Stiles, Kuzma, & Elliott (1995) analyzed 54 items measuring attitudes toward overall support and benefits, student learning outcomes, immediate student payoffs, academic requirements, and student-employer roles. They found significant differences between

student and employer views for 32 of the measures. Some of the disagreed upon measures include: whether employers got their money's worth for intern work; whether internships should be substituted for coursework; whether internships should result in a permanent job offer; whether internships should be paid; and the level of value internships present for the participating organization.

In their 2012 article, Templeton, Updyke & Bennett identify an important contribution internships could have on quantifying higher education outcomes. As they outline, internships are an excellent way to connect academic/classroom knowledge to practical experiences. As such, they argue that internships have potential to be great tools for assessment of learning. The use of internships as an assessment tool is currently underutilized and underdeveloped. However, they argue that, if utilized correctly, could be "one of the best possible platforms on which to conduct unbiased [assessment] activities" (Templeton et al., 2012, p. 35).

Interdisciplinary Learning

Mueller, Juris, Willermet, Drake, Upadhaya, & Chhetri (2014) describe well the practicality of interdisciplinary learning. According to Mueller et al. (2014), interdisciplinary learning makes sense as "Real world problem solving often occurs in groups, combining different strengths and different backgrounds" (p. 121).

Benefits of Interdisciplinary Learning

As described by Ivanitskaya, Clark, Montgomery, & Primeau (2011), "By focusing on an issue or core theme, interdisciplinary approaches encourage students to perceive the connections between seemingly unrelated domains, thereby facilitating a personalized process of organizing knowledge" (p. 99). Moreover, they note that

"students engaged in interdisciplinary programs are more likely to acquire integrated perspectives and solution focused strategies, rather than context-specific knowledge derived from a single discipline" (Ivanitskaya et al., 2011, p. 108).

Lattuca, Knight, Seifert, Reason, & Liu (2017) note an improvement in engagement for students involved in interdisciplinary learning. More specifically, they note that these students tend to enjoy thinking about complex, real-world problems and researching and analyzing solutions across disciplines. This corroborated findings by Quitadamo and Campanella (2005), who found that problem-based interdisciplinary learning improved engagement, participation, time on task, focus and interest. Quitadamo and Campanella (2005) suggests that a problem-based learning approach to interdisciplinary learning caused students to take a "greater interest in the process and been more invested in the quality of the project's outcome" (p. 31).

Participation in interdisciplinary learning also had a positive impact on personal growth. According to White and Nitkin (2013), students who participated in interdisciplinary learning noted greater self-confidence as well as heightened interest in future leadership roles. Additionally, students felt a greater sense of connection to their university community.

Making Interdisciplinary Learning Successful

Adya, Temple & Hepburn (2015) suggest that early engagement (as early as the first year in higher education) in interdisciplinary learning will help orient and set expectations for which institutions can build upon in the subsequent years. Additionally, Adya et al. (2015) notes that active and engaged faculty improve interdisciplinary

learning. Specifically, they note the importance of faculty continuing to have an entrepreneurial spirit and a willingness to evolve.

For interdisciplinary learning to be successful, higher education needs to be committed. As described by Adya et al. (2015), investments in support and resources and maintaining standards are essential.

Student-Operated Businesses

Over the years, universities have looked to complement traditional classroom teaching with experiential learning opportunities. By taking that idea one-step further and creating student-operated businesses, universities were able to provide more than experiential learning opportunities. With these additions, universities were able to cultivate student entrepreneurship, add to the campus environment, develop their brand, and in some cases, diversify their revenue streams.

One of the earliest adopters of experiential learning was in the area of marketing and advertising. In their 1992 study, Avery and Marra outline the benefits of having student-run enterprises. First, they argue that student-run agencies provide students with experience and an opportunity to develop their portfolio. Additionally, they are able to try a variety of positions (account management, media, research, art, etc.) within an agency to help them better determine their interests. Second, Avery and Marra (1992) note that the student-operated enterprises allow the university "an avenue for providing services to the community" (p. 2). Here, student-operated businesses may provide the community with a low-cost option for services they do not currently provide. These services also extend the university into the community, creating greater visibility for the university.

The largest entirely student-run non-profit corporation in the world is The Corp, located at Georgetown University. It consists of seven subsidiary companies generating annual revenues in excess of $5 million. According to The Corps website, only undergraduate students of Georgetown University work as employees or sit as members of The Corp's Board of Directors, distinguishing business operations at The Corp from other student-run companies. With over 400 employees, The Corp has its own human resources, IT, marketing, and accounting departments.

There are a myriad of other university-owned, student-operated businesses. Also at Georgetown University is the Alumni and Student Credit Union, which is completely run by students. The University of Massachusetts has eight student-run businesses on campus including a copy shop. At Loyola University in Chicago, students can choose to operate one of three campus businesses. Penn State's Berkey Creamery has been a staple of the campus environment since 1865.

In an article written by Evans (2013), some of the challenges in student-operated businesses are discussed. As noted by Evans (2013), "Though the experience has been fruitful for many students, the businesses themselves often struggle under their revolving cast of owners" (para. 8). Even in the best of scenarios, significant turnover needs to be built into the formula if businesses are to be successful and profitable. According to Evans (2013), Loyola University has "attempted to address the high turnover issue by rolling students through various positions in the companies to allow for knowledge to be passed down from predecessors" (para. 9).

Despite these challenges, the benefits, including providing experiential and practical learning experiences, continue to move universities in the direction of providing these opportunities to students.

History of Brewing/Brewing Science Programs

The history of brewing programs dates back to 1868 when John Siebel founded the Zymotechnic Institute in Berlin, Germany. By the time Siebel relocated the Institute to Chicago in 1872, it had become a research station and a school for brewing sciences. At this time, the Institute formerly changed its name to the Siebel Institute of Technology. Over the next couple of decades, Dr. Siebel immersed himself in brewing research, publishing over 200 books and scientific articles ("Focus and History," n.d). In 1901, The Siebel Institute of Technology was incorporated and began providing brewing courses in both English and German.

While the Siebel Institute of Technology is credited as offering the first brewing courses in the country, University of California-Davis (UC Davis) was the first four-year, university-level brewing degree program in the United States. The 1971-1972 academic year catalog first noted UC Davis' offering of a fermentation science program with a concentration in brewing. UC Davis is still a leader in brewing science, offering an undergraduate curriculum as well as graduate level coursework (Acitelli, 2015). Now, there are over 40 brewing science programs in the country ("Beer Schools," 2019).

As Nielsen, Sorensen, Simonsen, Madsen, Muff, Strandgaard, & Sogaard (2016) note, brewing and beer has always been an interest to students. However, how you leverage that interest determines the success of the venture.

According to Nielsen et al. (2016), brewing can be used as a learning tool or platform. Specifically, their study "showed that using beer as a basis functioned very well in aiding students in systematizing and elaborating on concepts as well as emphasizing the importance of chemistry" (p. 1549). In this study, Nielsen et al. (2016) used brewing as a learning platform for chemical engineering. Hooker, Deutschman, & Avery (2014) note that brewing can actually disguise learning. As Hooker et al. (2014) notes, "students might believe they are simply in a class to learn how to brew beer. However, the instructor is able to harness student interest and lead them to deeper critical and analytical thinking than is often possible in typical [introductory courses]" (336). Further, Pelter (2006) used a brewing science course as a method for providing non-science majors with an understanding of scientific methods and increased awareness of science in their daily lives.

Innovation Brew Works

In 2014, Cal Poly Pomona opened the first university-owned brewery-brewpub on university's campus. As part of the Collins College of Hospitality Management and College of the Extended University, the concept was that students would have the opportunity to acquire hands-on experiences with brewing and brewpub operations. Corresponding with the brewery's official tagline "Crafting an Education," Cal Poly Pomona students are intimately involved in the learn-by-doing processes. The brewery consists of a three-barrel brewing system, which is capable of brewing up to 100 gallons of beer at a time. Additionally, a set of smaller systems with a 10-gallon capacity allows students to experiment with a variety of brewing styles. The brewpub also offers custom pizzas, salads and fresh sandwiches. As noted in an article written by Bennett (2015),

"what started as just a few easy-drinkers to serve along with pizza and pub grub at Innovation Brew Works has since expanded into not only a significant experiment in grain-to-glass brewing but also a new (and profitable) model for brewing-science education" (para. 6).

Summary

In this chapter, I provided an in-depth literature review on topics related to having a university-owned and operated brewery and brewpub on campus. First, I discussed alcohol use on college campuses, the impact of alcohol use on students and the campus community, as well as strategies to improve alcohol misuse trends on college campuses. Next, I discussed the fierce competition for students and the facilities arms race, which is focused on recruiting and retaining students. I then discussed the ethical decision making process in student affairs. From there, Kolb's theory on experiential learning was explained, including its benefits to students, employers and higher education. Next, I provided examples of other student-operated businesses on college campuses and ended with a history of brewing science in the United States, as well as providing some basic information on Innovation Brew Works.

Chapter Three

Methodology

Introduction

The purpose of Chapter 3 is to introduce the research methodology for this qualitative single case study that examines what can be learned from the country's first university-owned brewery and brewpub. First, I describe qualitative research generally and discuss why this methodology was appropriate for this research question. Next, I describe the case study methodology and the social constructivist approach. I then outline the research plan, including participant information, data collection procedures and data analysis procedures. Lastly, I discuss relevant ethical considerations in the data collection and analysis phases and researcher bias.

Cal Poly Pomona and Innovation Brew Works

Cal Poly Pomona, founded in 1938, is a public, polytechnic university located in Pomona, California, about 30 miles east of Los Angeles, California. In 2017, Cal Poly Pomona had an enrollment of 25,984, with 24,314 undergraduate students and 1,580 graduate students. According to US News and World Report, the campus setting is suburban and spans approximately 1,438 acres. Cal Poly Pomona's Latin motto, *Instrumentum Disciplinae,* translates to "Application of Knowledge," reflecting the university's learn-by-doing approach to academics. According to their website, Cal Poly Pomona cultivates "success through experiential learning, discovery, and innovation. [Graduates] are ready to succeed in the professional world on Day 1" (para. 1).

In 2014, Cal Poly Pomona opened the first university-owned brewery-brewpub on university's campus. As part of the College of the Extended University and the Collins

College of Hospitality Management, the concept was that students would have the opportunity to acquire hands-on experiences with brewing and brewpub operations. Corresponding with the brewery's official tagline "Crafting an Education," Cal Poly Pomona students are intimately involved in the learn-by-doing process. The brewery consists of a three-barrel brewing system, which is capable of brewing up to 100 gallons of beer at a time. Additionally, a set of smaller systems with a 10-gallon capacity allows students to experiment with a variety of brewing styles. The brewpub also offers custom pizzas, salads and fresh sandwiches. Innovation Brew Works serves as the hub for Cal Poly Pomona's brewing science offerings, including its Assistant Brewer Training Program.

Research Questions

This study and the following methodology answered the following research question: What can be learned from the country's first university owned brewery and brewpub? The following are related sub questions:

- Given the documented negative consequences of drinking alcohol on college campuses, how was the decision reached to create an on-campus brewery and brewpub?
- What role, if any, did ethical considerations have in the discussion to create an on-campus brewery and brewpub?
- How has the brewery and brewpub contributed to the on-campus environment?
- How has the brewery and brewpub contributed to the academic environment and employability of students?

Qualitative Methodology

According to Stake (2010) qualitative methodology seeks to explain a phenomenon by relying "primarily on human perception and understanding" (p.11) of a person's experience in a given situation. While Creswell (2016) does not specifically define qualitative research, he does provide core characteristics of qualitative research. According to Creswell (2016), these characteristics include:

- Data collection in a natural setting;
- Researchers as key instruments;
- Researchers use multiple sources of data;
- Researchers use inductive and deductive data analysis;
- Researchers focus on participants' meanings;
- Researcher process is emergent;
- Researchers utilize reflexivity; and
- Researchers provide a holistic account.

According to Creswell (2016), the idea behind qualitative research is to "purposefully select participants or sites (or documents or visual material) that will best help the researcher understand the problem and the research question" (p. 239).

Qualitative research is characterized as having an emergent design. As noted by Creswell (2016), this means that the initial plan for research "cannot be tightly prescribed, and some or all phases of the process may change or shift after the researcher enters the field and begins to collect data" (p. 235). As such, components of the research plan may change during the process to ensure the most appropriate methods of data collection are used.

Case Study Methodology

For the purpose of this qualitative research, I utilized the case study methodology, researching Cal Poly Pomona's Innovation Brew Works. The case study methodology seems appropriate based on Bromley's (1986) description of when to use a case study. According to Bromley (1986), "All case study research starts from the same compelling feature: the desire to derive a(n) (up-)close or otherwise in-depth understanding of a single or small number of "cases" set in their real world context" (p. 1). Similarly. Yin (2012) notes that a case study is used when the researcher wants to study a phenomenon within its real-world context or when a study favors the collection of data in natural settings. For this dissertation, I used Innovation Brew Works, the first university-owned brewery and brewpub, as the case to be studied. According to Merseth (1994), the definition of a case study "reaffirms three essential elements of cases: (a) they are real, (b), they rely on careful research and study, and (c) they foster the development of multiple perspectives by users" (p. 2).

According to Merriam (1998), case study methodology has three characteristics. They are particularistic, descriptive and heuristic. Case studies are particularistic because they provide a detailed explanation of a phenomenon, situation or event in a particular setting, bound by place and time. They are descriptive because they provide a rich description of the phenomenon being studied. Lastly, case studies are heuristic because they describe the reasons for a problem or issue and describe the phenomenon in detail.

While Yin (2012) outlines a number of opportunities to use case study research, Bromley (1986) highlights one of the more compelling reasons for using a case study. According to Bromley (1986), case study research is appropriate because it "favors the

collection of data in natural settings" and because the researcher wants to study a phenomenon "within its real-world context" (p. 23). To best understand what can be learned from the country's first university-owned and operated brewery and brewpub, it is important to study the brewery and brewpub in its natural setting. For this dissertation, I studied Innovation Brew Works in its natural setting.

Merriam (1998) provides a thorough outline of the strengths and weaknesses of the case study methodology. According to Merriam (1998) case studies are more concrete, more contextual, more developed by reader interpretation, are "anchored in real-life situations, which results in a rich account of a phenomenon," and are best suited for studying "educational innovations, for evaluating programs, and for informing policy" (p. 41). According to Merriam (1998), however, case study research can be lengthy, oversimplified, and limited by researcher bias.

Social Constructivism

Given the similarities to case study research, the social constructivist approach was a logical choice for this dissertation. According to Creswell (2014), social constructivists believe that individuals "seek understanding of the world in which they live and work" (p. 8). Moreover, the goal of social constructivism is to "rely as much as possible on the participants' views of the situation being studied" (Creswell, 2014, p. 8). Both the case study methodology and social constructivism rely on interactions in natural settings. Additionally, both the case study methodology and constructivist approach would favor researchers and their background as an instrument in the study. By utilizing the social constructivist approach, I gained a better understanding, through research in a

natural setting, of how Innovation Brew Works has impacted students and the campus community.

Pilot Study

Prior to completing my dissertation research at Cal Poly Pomona, my dissertation committee suggested I conduct a pilot study at a regional university brewery. In fall 2019, I conducted a pilot study at The Jolly Scholar at Case Western Reserve University in Cleveland, Ohio. Institutional Review Board (IRB) approval was obtained at both the University of Toledo and at Case Western Reserve University prior to conducting the research. While the brewery was not owned and operated by Case Western Reserve University (unlike Cal Poly Pomona), it did, however, offer an opportunity to discuss the ethics of having a brewery on campus as well as the experiential learning opportunities available for students. For the purpose of the pilot study, I interviewed five participants. While data was collected, the purpose of the pilot study was to develop the questions included in my interview protocol and ensure the topic and interview protocol produced substance and content reasonable to research. Data from this pilot study was not be used for this dissertation study.

Data Collection

Qualitative data was primarily collected during a four-day, in-person site visit to Cal Poly Pomona, located in Pomona, California in February 2020. Cal Poly Pomona was chosen for this case study as they were the first university in the country to have an operational brewery and brewpub on a college campus. Data was collected in three ways:

1. Interviews,
2. Observation, and

3. Document analysis.

Due to some unforeseen unavailability during the on-campus site visit, phone interviews were added to supplement in-person interviews.

Interviews. For this study, I conducted on-site campus interviews and telephone interviews with representatives from Cal Poly Pomona. For the interviews, three groups of individuals served as data points: administrators, students (current and past) and faculty. I utilized a type of non-probability, purposive sampling known as snowball sampling to select participants. As Maykut & Morehouse (1994) describe, snowball sampling occurs when one research participant or setting leads to another or snowballs. According to Bernard (2006), it is "pointless to select a handful of people randomly from a population" (p. 191) when you are able to better select those more intimately involved and knowledgeable about the research being conducted. To select interview participants, I initially worked with Charlene Ashton, PhD, Associate Director of Program Development for the College of the Extended University; additional relevant participants "snowballed" from there. Howard Evans, PhD, Dean of the College of the Extended University & International Center, recommended Dr. Ashton as a contact for this project. The College of the Extended University is the College where the brewing science programs are located for Cal Poly Pomona. Dr. Ashton and I discussed my dissertation and she suggested a couple administrators to talk with, including an Associate Dean in the Collins College of Hospitality Management and the Cal Poly Pomona Foundation's Director of Dining Services. After they agreed to participate, I discussed with them other administrators/staff and faculty/instructors who would make sense to talk with for this dissertation. Since they were two of the main architects behind the creation of Innovation

Brew Works, they were able to provide me additional administrators/staff and faculty/instructors to round out the list. One of the suggestions they had was to speak with the Innovation Brew Works Brew Master. The Brew Master was then able to help me identify former and current students who have had experience working at Innovation Brew Works.

I utilized an open-ended question format for face-to-face and telephone interviews. Interviews with administrators, faculty and students were conducted in the Center for Training, Technology, and Incubation conference room or at Innovation Brew Works. Two of the administrator interviews were conducted over the phone as they were unavailable during the site visit. In sum, 12 interviews were conducted. All interviews were recorded digitally and took between 20 and 45 minutes. According to Creswell (2014), the goal of the open-ended questions should be to "elicit views and opinions from the participants" (p. 246). Questions for administrators focused on the decision-making process to create innovation Brew Works (from information gathering, to ethical considerations, to implementation, etc.) and how the brewery and brewpub has impacted the campus environment. Questions for current and past students centered on the following:

- How/if Innovation Brew Works has provided an avenue for practical experience.
- How/if that experience has prepared them for employment.
- How/if that experience has impacted their understanding of workplace expectations.

- How/if that experience has impacted their understanding of interdisciplinary learning.
- Any other notable impacts Innovation Brew Works has had on the campus community.

The goal in conducting interviews was to reach saturation. As Glaser & Strauss (1967) describe, saturation occurs when the collection of new data does not shed any further light on the issue under investigation. As Mason (2010) notes, "researchers generally see saturation as a guiding principle during their data collection" (p. 2). While the concept of saturation has become the gold standard for purposive sampling, Guest, Bunce & Johnson (2016) argue that the concept is difficult to predict prior to conducting the study. Moreover, Guest et al. (2016) note that current literature has done a "poor job in operationalizing the concept of saturation, providing no description of how saturation might be determined and no practical guidelines for estimating sample sizes for purposively sampled interviews" (p. 60). In their 2016 study, Guest et al. sought to quantify the number of interviews needed in a qualitative study. Here, Guest et al. (2016) note the importance of being able to "know how many interviews they should budget for and write into their protocol, before they enter the field" (p. 60). According to their research, saturation had mostly occurred by the time they had conducted 12 interviews, as roughly 90% of codes had been developed at that time. Based on these results, I conducted 12 interviews. Please see "Appendix A" for proposed interview protocols.

Those interviewed represented various levels of experience, perspective, and responsibility for Innovation Brew Works and Cal Poly Pomona. Participants' positions included: university administrators at the director, associate dean, associate vice

president, and president level; a current university lecturer; foundation administrators at the manager, director, and executive director levels; and current and past students. Due to the emergent design of qualitative case study research, it was difficult to identify the exact composition of the interview pool prior to beginning the research. Please see "Appendix B" for a description of those I interviewed. Prior to in-person interviews, each participant was sent the informed consent form and was asked to review. At the time of the in-person interview, I reviewed the informed consent, including risks and benefits, had them verbalize they understood the consent and had them sign the consent to participate. For phone interviews, I sent the informed consent form ahead of time and then reviewed the consent with the individual over the phone, asked for them to verbalize their understanding of the informed consent, and had them verbalize consent to continue with the interview. This consent form was reviewed and approved by the IRB at both the University of Toledo and Cal Poly Pomona. Please see "Appendix C" for the proposed informed consent form.

Observation. Second, I used observation at the brewery and brewpub. Marshall and Rossman (1989) define observation as the "systematic description of events, behaviors, and artifacts in the social setting chosen for study" (p. 79). Here, I gained a better understanding of the relationship between Innovations Brew Works, the campus and the greater Pomona community. Additionally, I saw firsthand the experiential learning opportunities available and the interaction between student workers and the business environment. Given that I would be and did meet with individuals at Innovation Brew Works and interacting with Innovation Brew Works employees, I was an active participant while observing. I observed at Innovation Brew Works, both in the brewery

and in the brewpub. While observing, I actively observed the environment and took detailed field notes through freeform journaling. I did not utilize any templates for observation notes. I spent approximately seven hours during my site visit to reach observational saturation.

Document Analysis. Third, I used document analysis as part of the data collection process. According to Bowen (2009), document analysis is the "systematic procedure for reviewing or evaluating documents-both printed and electronic (computer-based and internet-transmitted) material" (p. 27). Often, according to Bowen (2009), documents can "provide data on the context within which research participants operate" (p. 29). First, I reviewed available Cal Poly Pomona Foundation Board of Trustees meeting minutes, including Board of Directors' meeting minutes, during the decision making process. As the Board of Trustees documents are public domain and available online, I was able to review those without incident. Next, I spent significant time reviewing the Innovation Brew Works website, including links to articles written about the creation of Innovation Brew Works. I then reviewed Cal Poly Pomona's main website, specifically looking at sections related to the Cal Poly Pomona's mission and campus life. Additionally, I reviewed the College of the Extended University and the Collins College of Hospitality Management website sections as they utilize Innovation Brew Works for educational experiences. For information on alcohol-related arrests and referral/disciplinary action, I reviewed Cal Poly Pomona's most recent Campus Security Report. Lastly, I reviewed marketing materials and promotional materials for Innovation Brew Works during my site visit. According to Bowen (2009), document analysis is often

used in combination with other qualitative research methods to "seek convergence and corroboration through the use of different data sources and methods" (p. 28).

Data Analysis

The first step I took to analyze the data was to listen to the interviews multiple times. I did this the same evening that I conducted the interviews so that the interview was still fresh in my mind. I kept a codebook for each interview with notes about expressions or phrases that seemed particularly relevant while listening to the interviews. As described in Creswell (2013), the process of coding involves "aggregating the text or visual data into small categories of information, seeking evidence for the code from different databases being used in a study, and then assigning a label to the code" (p. 184).

Next, I personally transcribed all 12 of the interviews. I felt strongly about transcribing my own interviews, though I knew it would be time consuming. As Lapadat & Lindsay (1999) argued:

> Analysis takes place and understandings are derived through the process of constructing a transcript by listening and re-listening, viewing and reviewing. We think that transcription facilitates the close attention and the interpretive thinking that is needed to make sense of the data.

Similarly, Bailey (2008) argued that transcribing your own data is an important first step in data analysis. As Bailey (2008) stated, "This familiarity with the data and attention to what is actually there rather than what is expected, can facilitate realizations or ideas which emerge during analysis" (p. 129).

I created a Microsoft Word document with headings that included my overarching research question and my four research sub questions. Here, I used my research sub-

questions as a way to establish a priori categories. As Ryan and Bernard (2003) state, an a priori approach uses an "investigator's prior theoretical understanding of the phenomenon under study" (p. 88). Because of my familiarity with the literature, I had a sense of the salient areas to investigate. First, since this was a novel concept, it seemed important to understand the story of how the brewery was created. Second, given the relationship between alcohol and higher education, it seemed important to understand the decision making process to open a brewery. Third, it was important to understand the brewery's contributions to the campus environment as competition for students and retention of students is so important to a university's viability. Lastly, I studied the academic component of the brewery given that it was a novel concept as well as a large component in getting the brewery established and creating its identity. Moreover, as Ryan and Bernard (2003) argue, the first pass at generating themes often comes from questions in an investigator's interview protocol. I used these sub-questions to drive the content analysis of my interviews.

Next, I used a process of cutting and sorting as described by Ryan and Bernard (2003) to categorize quotes and expressions from the interviews to the questions to which they were related. As Ryan and Bernard (2003) described, I identified "quotes or expressions that [seemed] somehow important then [arranged] the quotes/expressions into piles of things that go together" (p. 94). For the first pass, I categorized all quotes or expressions from the transcripts within the four sub-questions regardless if I felt that they were especially important or not. From there, I read and reread the quotes and expressions under each of the research questions and looked primarily for repetition. As noted by several authors, repetition is one of the easiest ways to identify themes (Bogdan

& Taylor, 1975 & Ryan & Bernard, 2003). Moreover, some of the clearest themes are those "topics that occur and recur" (Bogdan & Taylor, 1975, p. 83) or are "recurring regularities" (Guba, 1978, p. 53). During this process of open coding and identifying repetition, my questions that had been used as a priori categories moved and expanded to emergent categories, and finally, emergent themes. Additionally, this process helped me hone in on particularly quotes that were more substantive versus simply descriptive.

I cut and sorted my quotations and expressions a second time and reorganized them into groups that fit with the more well-defined categories and themes that had developed. Here, the process moved from my initial research questions driving the analysis to having the data drive the analysis and themes that emerged. As described by Creswell (2013), themes are "broad units of information that consist of several codes aggregated to form a common idea" (p. 186).

Following the process of identifying emergent themes, I then sought to validate findings. To validate findings, I employed member checking. As described by Creswell (2013), "In member checking, the researcher solicits participants' view of the credibility of the findings and the interpretations" (p. 252). I provided an electronic copy of Chapter 4 to participants so they could "judge the accuracy and credibility of the account" (Creswell, 2013, p. 242).

In addition to the above interview transcription and analysis, observation notes were analyzed in order to add to the "rich, thick description" in conveying findings. According to Denzin (1989), thick descriptions are "deep, dense, detailed accounts" (p. 83). Moreover, Creswell (2000) describes the purpose of a thick description as creating "verisimilitude, [and] statements that produce for the readers the feeling that they have

experiences, or could experience, the events being described in the study" (p. 129). Similar to the process for interview transcription, observation notes were analyzed for codes, categories, and themes.

Next, the document analysis was performed and analyzed for codes, categories, and themes. As Bowen (2009) describes, "The reviewer takes a closer look at the selected data and performs coding and category construction, based on the data's characteristics, to uncover themes pertinent to a phenomenon" (p. 32). As stated before, the codes and themes were used to integrate with data collected by other qualitative methodologies as mentioned above.

Each data collection method (interviews, observation and document analysis) had its own codebook. This helped in identifying major themes across the three data collection methods. From there, I was able to triangulate the collected data across all data points including interviews, observation and document analysis. According to According to Patton (1999), triangulation involves using multiple data sources in an investigation to produce understanding. Moreover, Stake (2010) asserts that the goal of triangulation is to make sure the researcher gets "meanings straight" and to be more confident that the "evidence is good" (p. 123). Moreover, Stake (2010) states that "[Triangulation] may make us more confident that we have the meaning right, or it may make us more confident that we need to examine differences to see important multiple meanings" (p. 124). Through the process of triangulation, I was able to ensure a higher level of internal validity of the data. As Patton (1999) states, "Because each method reveals different aspects of empirical reality, multiple methods of data collection an analysis provide more grist for the research mill" (p. 1192).

Ethical Considerations

To initiate this research project, I obtained approval from both the IRB for the University of Toledo and the IRB for Cal Poly Pomona. The areas of concerns for this study are relatively limited due to the scope of this research project. Each participant was given an informed consent form that highlights the goals, process, purpose and potential use of the study's outcomes. The participants were allowed to view the data before the data are used for publishing implications for the study. The participants had the right to decline to answer any question during the interview process. Each participant was initially given a pseudonym to protect his or her anonymity. Pseudonyms were named by their categorical type (Administrator, Current Student, Past Student, Employer) and a corresponding number (1, 2, 3, etc.). To help with the flow of Chapter 4 and because in some areas it was difficult to maintain anonymity, I decided to use actual interviewee names for this dissertation. Prior to making that decision, I discussed with each interviewee and received email approval for the use of their names.

As with any research utilizing human beings, the potential for ethical issues may occur (Belmont Report, 1979). However, because of the study parameters, the likelihood of potential issues regarding the use of data were minimal.

Researcher Bias

In selecting this topic, I would like to outline my interests related to this study. I selected this topic because I have significant interest in craft brewing and the craft brewing industry. I do believe that craft breweries are additive to communities and am interested in understanding if they can be additive to higher education communities and in what ways. That said, I do not have any financial interest in any craft brewery and

have no other pertinent disclosures to note. However, I do note that I had to be cautious of my own biases and interests and set them aside so that my data gathering and analysis is as free from personal bias as possible.

Summary

The proposed qualitative research study provided meaning to the following question: *What can be learned from the country's first university owned brewery and brewpub?* To answer this question, I employed a case study methodology, utilizing the following instruments: in-person and telephone interviews; observation; and document analysis. In conducting this research, I have provided insight into the decision making process to create Innovation Brew Works and also how the creation of Innovation Brew Works has impacted the Cal Poly Pomona campus environment.

Chapter Four

Findings

Introduction

The purpose of this case study was to explore the question of what can be learned from the country's first university-owned brewery and brewpub. In Chapter 4, I provide a description and analysis of the data gathered. First, I provide an overview of the research setting. Next, to better understand the case being studied, I provide an overview for how Innovation Brew Works was created, from concept to completion. From there, I provide an overview of the data collection process, which includes the sampling and interview process (including interview participant descriptions), the observation process, and the document analysis process. Next, I describe the data analysis process, which included coding and categorizing the interviews, observations, and document analysis, and the themes that emerged in each of those categories. In the description of themes that emerged from interviews, I also include data from my document analysis and observations in the brewery to add additional depth and description. Lastly, I provide a brief and succinct summary of findings. While the data collected sought to provide an overall answer to the question, *What can be learned from the country's first university owned brewery and brewpub?*, my analysis of the data was guided by the following more specific research sub-questions:

- Given the documented negative consequences of drinking alcohol on college campuses, how was the decision reached to create an on-campus brewery and brewpub?

- What role, if any, did ethical considerations have in the discussion to create an on-campus brewery and brewpub?
- How has the brewery and brewpub contributed to the on-campus environment?
- How has the brewery and brewpub contributed to the academic environment and employability of students?

Research Setting

For this dissertation study, I primarily collected data during an on-campus site visit at Cal Poly Pomona in February of 2020. Cal Poly Pomona, founded in 1938, is a public, polytechnic university located in Pomona, California, about 30 miles east of Los Angeles, California. In 2017, Cal Poly Pomona had an enrollment of 25,984, with 24,314 undergraduate students and 1,580 graduate students. Cal Poly Pomona's Latin motto, *Instrumentum Disciplinae,* translates to "Application of Knowledge," reflecting the university's learn-by-doing approach to academics. According to their website, Cal Poly Pomona cultivates "success through experiential learning, discovery, and innovation. [Graduates] are ready to succeed in the professional world on Day 1" (para. 1). To best describe the Cal Poly Pomona campus, it is helpful to understand the origins of the campus.

Cal Poly Pomona's campus is the result of a large donation from W.K. Kellogg, the breakfast cereal pioneer. In 1925, Kellogg built his winter residence in the rolling hills of what is now the northern edge of the campus. As Cal Poly Pomona described:

> What is now the green wooded expanse of the university was originally the winter ranch home of W.K. Kellogg, of breakfast cereal fame. Cal Poly Pomona has preserved many features of Kellogg's hilltop Arabian horse ranch, including his

> mansion, rose gardens, avocado groves, stables, and of course, the award winning Kellogg Arabian horses, featured in horse shows on campus (The Kellogg Connection, 2020, para. 2).

Understanding that this was once a ranch, helps to visualize how the campus feels. There are still strong ties to agriculture across campus, with lush gardens, scores of orange trees, and enough animals to feel like you are on a production farm. In the shadows of the San Gabriel Mountains, the campus initially feels compact, but it is actually quite expansive, with approximately 1,438 acres, according to US News and World Report. The campus architecture, for the most part, screams southern California, with its Spanish influences, such as the tiled reddish orange rooves.

While the above description of the Cal Poly Pomona landscape paints the campus in an historical frame, the campus is far from dated. Cal Poly Pomona has preserved the charm of its origins, while offering state-of-the-art facilities for its students. Additionally, some of the newer buildings have challenged the Mission Revival architecture that had previously branded the campus. With its stamped and colored concrete floor, exposed duct work (painted black), and recessed lighting, Innovation Brew Works has a very modern feel. In addition to the hung flat panel televisions throughout the brewpub, the food and beverage menus are also digital. And there is one glaring absence from the brewery and brewpub: a bar. Instead, the brewpub features a walk-up counter and then a mixture of regular and high-top tables, varying in size to accommodate small or large gatherings. Also on display are the brewery operations, which are visible from most seats in the brewery. Here, there seems to be consistent activity throughout the day, which allows customers to watch the process as they enjoy the product. Finally, Innovation

Brew Works has added an outdoor area with a fire pit and other heating elements to expand its capacity and offer an avenue to enjoy the southern California weather.

Creating Innovation Brew Works: Concept to Completion

One of the challenges in understanding this case study prior to visiting Cal Poly Pomona was understanding how Innovation Brew Works moved from a concept to a reality. In looking through the Cal Poly Pomona website, Innovation Brew Works website, and Cal Poly Pomona Foundation Board minutes, there was very little information available about the process for establishing Innovation Brew Works. Descriptions during the creation phase were, at best, general and non-descriptive. Therefore, one of my goals during my site visit was gaining an understanding of how Innovation Brew Works evolved from a concept to its creation. The following description of how Innovation Brew Works was created is a compilation of pieces from discussions with those involved in its creation, from leadership, to academics, to logistics.

Cal Poly Pomona has two foundations on its campus. There is a philanthropic foundation, the CPP Philanthropic Foundation, and the Cal Poly Pomona Foundation, which houses the university's auxiliary services and real estate services. Auxiliary services for the Cal Poly Pomona Foundation manages the housing and dining services on campus. One of the largest real estate areas the Cal Poly Pomona Foundation manages is its Innovation Village. The 65 acre area is described as a "premier corporate research and technology park in the Southern California region. It is a unique environment that provides opportunity for collaboration with university researchers, students and administration in an environment that promotes excellence" (Innovation Village, 2019, para. 1). Here, the university houses several large organizations including the American

Red Cross and Southern California Edison, which is the primary electricity supplier for a significant portion of Southern California. In addition, Innovation Village also houses The Center for Training & Technology Incubation (CTTi), which offers emerging medium-sized companies to lease office space and wet lab space with convenient access to Cal Poly Pomona experts. In essence, Innovation Village is a working business park, housing some Cal Poly Pomona functions alongside medium-to-large size businesses and organizations.

At the entrance to Innovation Village sits Building 220A. While this building had housed a number of things over the years including a Cal Poly Pomona bookstore, it had most recently held a café and coffee shop. The hope had been that the addition of a café and coffee shop would be appealing to potential tenants, while driving revenue to the location. The café and coffee shop, which may have been successful in attracting tenants, failed to drive the sort of revenue to make it profitable. In 2012, dining services hired a consultant to look at all dining services on campus. That consultant surveyed students to see what dining additions they wanted on campus. One of the areas students consistently requested was a bar. The University had had a bar in the 1990s called Blazing Saddles. It was centrally located on campus, within the University's student union. Cal Poly Pomona Foundation's former Executive Director, Paul Storey, described Blazing Saddles as a poor fit for campus and said it seemed to encourage unhealthy alcohol consumption habits. The location of Building 220A represented a unique opportunity to explore a location to serve alcohol on campus. And with its location within Innovation Village, it could potentially offer Innovation Village tenants a place to convene over lunch or after work.

During the application process to the alcohol beverage control board, Cal Poly Pomona was asked to take their request to Pomona's city council to obtain a conditional use permit. According to Cal Poly Pomona's Director of Dining Services, Aaron Neilson, the initial request to city council was denied because they felt it was not consistent with Cal Poly Pomona's mission as a university. At that time, Cal Poly Pomona pulled back the project to reevaluate their request. According to Storey, it was around this time that the idea to create an educational brewery developed.

Initially, the idea was to utilize Cal Poly Pomona's College of the Extended University, which offers continuing education and certificate programs geared toward enhancing an individual's career skillset. With this idea in mind, the Neilson conducted some market research as to what sorts of educational programs would be helpful for the brewing industry. Neilson began to regularly attend Brewvengers meetings, which was a collaborative group of about 20 local and regional brewers. It was here Cal Poly learned that the industry desperately needed a cellarmen (later called the Assistant Brewer Training Program) program. Neilson described cellarmen as those individuals who do the grunt work of operating a brewery. They make sure everything is cleaned and sanitized, they take stock, and they assist on brew day. They are not, however, typically the individuals doing the actual brewing or creating the recipes. While Innovation Brew Works would later expand to include opportunities for students within the Collins College of Hospitality Management, this Assistant Brewer Training Program created the framework for being able to move this idea forward.

With a revised educational focus, Cal Poly Pomona Foundation's Executive Director sought approval from the University's President, Michael Ortiz, to proceed with

the concept. Storey recalled Ortiz's initial reaction to the request as speechless. However, after expounding on the concept and presenting the facts, the Ortiz gave the approval to move forward with seeking Cal Poly Pomona Foundation board approval. According to Cal Poly Pomona Foundation board minutes, that approval came during the November 13, 2013 Board of Directors Meeting. There, in a unanimous vote, the Cal Poly Pomona Foundation approved a capital request of $400,000 to convert the CTTi Café into a brewery laboratory. The board noted its potential educational value and the creation of a revenue stream for the Cal Poly Pomona Foundation that was "consistent with the Dining Services Master Plan" (Cal Poly Pomona Foundation, 2013, p. 2). From there, Cal Poly Pomona hired Ritual Brewing's co-founder, Owen Williams, to help with the design and build of Innovation Brew Works. With his knowledge and expertise, a functional brewery was created within building 220A. In addition, the brewery was designed to be educationally focused, with teaching/learning stations where students could experiment. In September 2014, Innovation Brew Works officially opened and by December 2014, began officially brewing their own beer. Following the opening of Innovation Brew Works, Cal Poly Pomona expanded their educational offerings at Innovation Brew Works by providing internships through the Collins College of Hospitality Management. In addition to an internship in brewing, Collins College Hospitality Management students could also intern on the food side of Innovation Brew Works. According to one of the Associate Deans of the Collins College of Hospitality Management, Michael Godfrey, they were able to build on objectives of other internships and offer education about different beers and styles, as well as pairings with food, and running and operating a brewery and brewpub.

Data Collection

Sampling and Interview Process. I utilized a type of non-probability, purposive sampling known as snowball sampling to select participants. As Maykut & Morehouse (1994) describe, snowball sampling occurs when one research participant or setting leads to another or snowballs. To select interview participants, I initially worked with Charlene Ashton, PhD, Associate Director of Program Development for the College of the Extended University; additional relevant participants "snowballed" from there. Howard Evans, PhD, Dean of the College of the Extended University & International Center, recommended Dr. Ashton as a contact for this project. The College of the Extended University is the College where the brewing science programs are located for Cal Poly Pomona.

I utilized an open-ended question format for face-to-face and telephone interviews. In-person interviews with administrators, faculty and students were conducted in the Center for Training, Technology, and Incubation conference room or at Innovation Brew Works. Two of the administrator interviews were conducted over the phone as they were unavailable during the site visit. All interviews were recorded digitally and took between 20 and 45 minutes. In sum, 12 interviews were conducted.

Those interviewed represented various levels of experience, perspective, and responsibility for Innovation Brew Works and Cal Poly Pomona. Participants' positions included: university administrators at the director, associate dean, associate vice president, and president level; a current university lecturer; foundation administrators at the manager, director, and executive director levels; and current and past students. Table 1 presents participant names, positions and years of service at Cal Poly Pomona.

Table 1

Participants' Information

Participant Name	Participant's Current Position	# of Years at the Institution
Godfrey, Michael	Associate Dean, The Collins College of Hospitality Management	26
Ashton, Charlene	Associate Director, College of the Extended University	6
Bassett, Eric	Brewmaster & Former Student	2
Young, Melody	Brewery & Brewpub Manager	2
Neilson, Aaron	Dining Services Director	9
Storey, Paul	Executive Director, Retired	22
Dargan, Benardo	Interim Associate Vice President & Dean of Students	1
Williams, Owen	Lecturer, The Collins College of Hospitality Management	11
Sidener-Mercado, Belisaria	Manager & Former Student	3
Ortiz, Michael	President Emeritus	11
Current Student	Student, Current	3
Current Student	Student, Current	3

Observation. I also used observation at the brewery and brewpub. Here, I gained a better understanding of the relationship between Innovations Brew Works, the campus and the greater Pomona community. Additionally, I saw firsthand the experiential learning opportunities available and the interaction between student workers and the business environment. Given that I would be and did meet with individuals at Innovation

Brew Works and interacting with Innovation Brew Works employees, I was an active participant while observing. I observed at Innovation Brew Works, both in the brewery and in the brewpub. While observing, I actively observed the environment and took detailed field notes through freeform journaling. I did not utilize any templates for observation notes. I spent approximately 7 hours during my site visit to reach observational saturation. These hours were spread over 4 different visits to the brewery, with visits occurring during lunch, dinner and near closing. Innovation Brew Works closes at 9 p.m. Monday through Thursday, 10 p.m. on Friday and Saturday, and 7 p.m. on Sunday.

Document Analysis. I used document analysis as part of the data collection process. First, I reviewed available Cal Poly Pomona Foundation Board of Trustees meeting minutes, including Board of Directors' meeting minutes, during the decision making process. As the Board of Trustees documents are public domain and available online, I was able to review those without incident. Next, I spent significant time reviewing the Innovation Brew Works website, including links to articles written about the creation of Innovation Brew Works. I then reviewed Cal Poly Pomona's main website, specifically looking at sections related to the Cal Poly Pomona's mission and campus life. Additionally, I reviewed the College of the Extended University and the Collins College of Hospitality Management website sections as they utilize Innovation Brew Works for educational experiences. For information on alcohol-related arrests and referral/disciplinary action, I reviewed Cal Poly Pomona's most recent Campus Security Report. Lastly, I reviewed marketing materials and promotional materials for Innovation Brew Works during my site visit.

Data Analysis

Interview Analysis. In brief, the process I used to analyzed the data was as follows: listened to the transcripts multiple times; personally transcribed each interview; read and reread transcripts multiple times; cut and sorted quotes and expressions based on my research questions; reread quotes and expressions after initial cut and sorting to identify repetition; cut and sorted quotes and expressions a second time based on the previous step to better align with the themes that had emerged from the more well-defined categories that had developed. The below describes this process is greater detail.

The first step I took to analyze the data was to listen to the interviews multiple times. I did this the same evening that I conducted the interviews so that the interviews were still fresh in my mind. I kept a codebook for each interview with notes about expressions or phrases that seemed particularly relevant while listening to the interviews.

Next, I personally transcribed all 12 of the interviews. I felt strongly about transcribing my own interviews, though I knew it would be time consuming. As Lapadat & Lindsay (1999) argued:

> Analysis takes place and understandings are derived through the process of constructing a transcript by listening and re-listening, viewing and reviewing. We think that transcription facilitates the close attention and the interpretive thinking that is needed to make sense of the data. (p. 82)

Similarly, Bailey (2008) argued that transcribing your own data is an important first step in data analysis. As Bailey (2008) stated, “This familiarity with the data and attention to what is actually there rather than what is expected, can facilitate realizations or ideas which emerge during analysis” (p. 129).

I created a Microsoft Word document with headings that included my overarching research question and my four research sub questions. Here, I used my research sub-questions as a way to establish a priori categories. As Ryan and Bernard (2003) state, an a priori approach uses an "investigator's prior theoretical understanding of the phenomenon under study" (p. 88). Because of my familiarity with the literature, I had a sense of the salient areas to investigate. First, since this was a novel concept, it seemed important to understand the story of how the brewery was created. Second, given the relationship between alcohol and higher education, it seemed important to understand the decision making process to open a brewery. Third, it was important to understand the brewery's contributions to the campus environment, recognizing that competition for students and retention of students is important to a university's viability. Lastly, I felt it was important to look at the academic component of the brewery because it was a novel concept, integral in getting the brewery established, and essential in creating its identity. Moreover, as Ryan and Bernard (2003) argue, the first pass at generating themes often comes from questions in an investigator's interview protocol. I used these sub-questions to drive the content analysis of my interviews.

Next, I used a process of cutting and sorting as described by Ryan and Bernard (2003) to categorize quotes and expressions from the interviews to the questions to which they were related. As Ryan and Bernard (2003) described, I identified "quotes or expressions that [seemed] somehow important then [arranged] the quotes/expressions into piles of things that go together" (p. 94). For the first pass, I categorized all quotes or expressions from the transcripts within the four sub-questions regardless if I felt that they were particularly salient. From there, I read and reread the quotes and expressions under

each of the research questions and looked primarily for repetition. As noted by several authors, repetition is one of the easiest ways to identify themes (Bogdan & Taylor, 1975 & Ryan & Bernard, 2003). Moreover, some of the clearest themes are those "topics that occur and recur" (Bogdan & Taylor, 1975, p. 83) or are "recurring regularities" (Guba, 1978, p. 53). During this process of open coding and identifying repetition, my questions that had been used as a priori categories moved and expanded into emergent categories, and finally, emergent themes. Additionally, this process helped me hone in on particular quotes that were more substantive versus simply descriptive.

I cut and sorted my quotations and expressions a second time and reorganized them into groups that fit with the more well-defined categories and themes that had developed. Here, the process moved from my initial research questions driving the analysis to having the data drive the analysis and themes that emerged. A summary of the initial a priori categories and the resultant emergent categories and themes is presented in Table 2.

Table 2

Summary of Sub-Questions (used as a Priori categories) and Emergent Categories and Themes

Sub-Questions	Emergent Categories	Emergent Themes
1. Given the documented negative consequences of drinking alcohol on college campuses, how was the decision reached to create an on-campus brewery and brewpub?	• Historical precedent of serving alcohol on campus • Understanding student population • Campus culture • Leadership • Physical location	• Environment

Sub-Questions	Emergent Categories	Emergent Themes
2. What role, if any, did ethical considerations have in the discussion to create an on-campus brewery and brewpub?	• Teaching responsibility • Weighing benefits versus harm • Marketing ethically • Training staff properly	• Administrative control and oversight
3. How has the brewery and brewpub contributed to the on-campus environment?	• Amenity versus academics • Business versus academics • Town and gown relations	• Innovation Brew Works' Identity
4. How has the brewery and brewpub contributed to the academic environment and employability of students?	• Experiential learning • Interdisciplinary learning	• Mission

When reading through the interview transcripts through the lens of sub-question number 1, several categories emerged as factors for aiding in the decision making process to create an on-campus brewery and brewpub. These categories included the historical precedent of serving alcohol on campus, understanding the student population, the campus culture, leadership, and the physical location of Innovation Brew Works. In looking at all of these categories together, it became clear that the emergent theme was the environment. These categories all related to the Cal Poly Pomona environment that created an ideal climate for establishing an on-campus brewery and brewpub.

Using sub-question number 2, the transcripts revealed clear categories that helped administrators and the community accept the idea of having a brewery on campus. These categories, which helped describe the ethical considerations and thought processes, included teaching responsibility, weighing benefits versus potential harm, marketing

ethically, and training staff properly. In looking at all of these categories together, they all had thematic elements of administrative control and oversight.

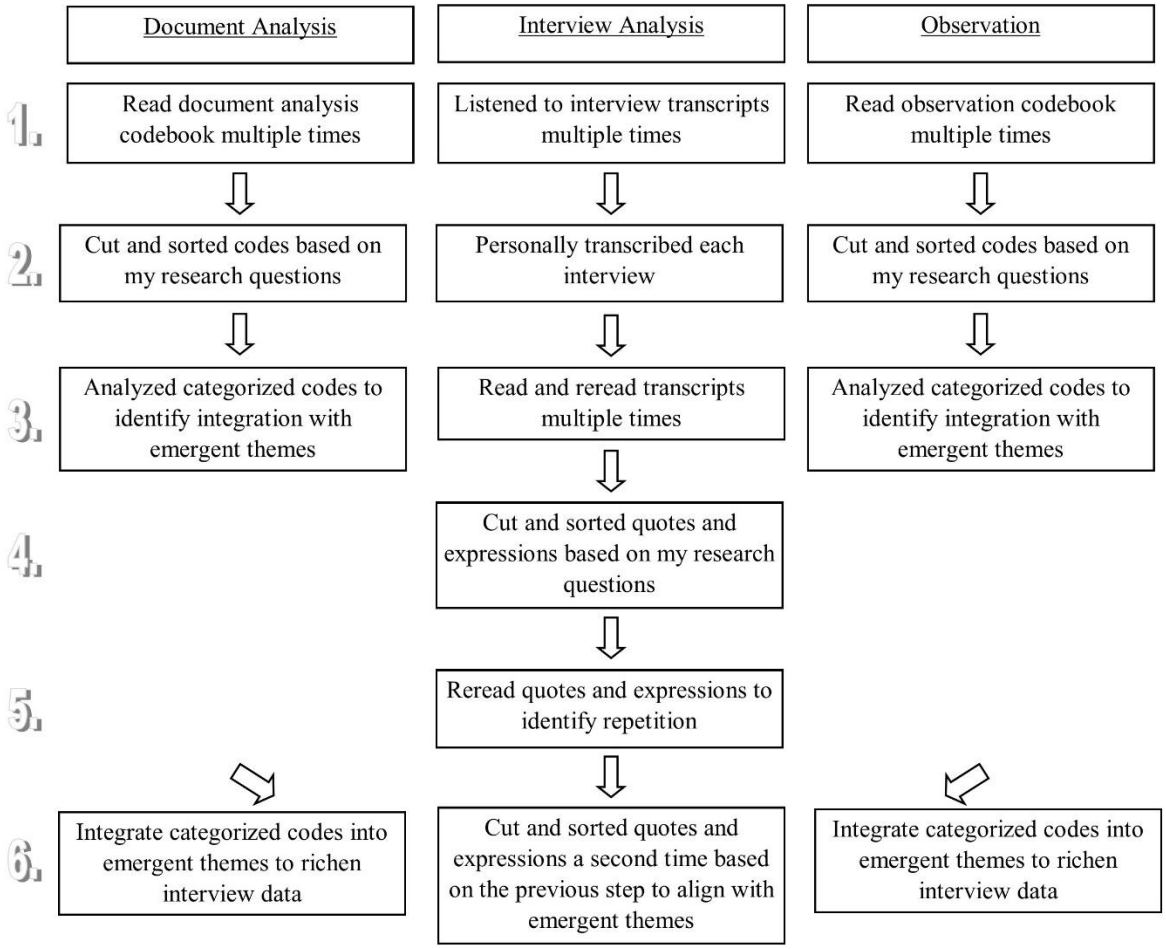
When reading through the interview transcripts through the lens of sub-question number 3, several categories emerged as impactful to contributions to the on-campus environment. These categories included looking at Innovation Brew Works as an amenity or an academic building, as a business or an academic building, and as an avenue to bolster town and gown relations. In looking at these categories together, the theme that emerged was establishing Innovation Brew Works' identity.

Lastly, using sub-question number 4, the transcripts revealed clear categories that contributed to the learning environment at Cal Poly Pomona. Specifically, the categories that emerged included experiential learning and interdisciplinary learning. Both of these areas are central to another emergent theme, which is the connection to the university's mission.

Observation and Document Analysis. As described above, I kept codebooks of notes for both the observational and document analysis I completed. I did the analysis of these codebooks following the interview analysis. In reviewing my codebooks, I felt the observational and document analysis data would be best utilized to add description and supporting facts to my interview findings. In other words, I used findings from my observational and document analysis to describe, support or refute the findings of my interview analysis. In the below description of the themes that emerged as a result of my research, I have added supportive evidence from the observation and document analysis. A summary of the data analysis process, which included interviews, observation and document analysis, is presented in Figure 1:

Figure 1

Summary of the Data Analysis Process



Findings

Theme 1: Environment. Understanding the institution's environment at the time the decision was reached to create Innovation Brew Works is significant to the overarching research question, *What can be learned from the country's first university owned brewery and brewpub?* For my research, environment refers to the students, culture, decision makers, and physical location at the time Innovation Brew Works was

created. An institution's environment often plays a pivotal role in decision making, especially when decisions involve novel concepts or creations.

Historical precedent for serving alcohol on campus. Cal Poly Pomona and its plan to create an on-campus brewery and brewpub benefited from having experience in serving alcohol on campus. First, they understood what they did not want Innovation Brew Works to be. As described earlier, Cal Poly Pomona had had a bar on campus previously. As Storey noted:

> We had a bar when I first started here back in 1995. It was called Blazing Saddles; it served beer and wine. We had very limited foods. I had the same customers sitting in there drinking all afternoon. It wasn't very healthy for the campus so I closed it down. So when students talked about wanting a bar on campus again, I sort of cringed.

So while a bar-type establishment was not the direction Cal Poly Pomona wanted to go, they had been able to successfully integrate service of alcohol in other areas on the campus. Operated and managed by Collins College of Hospitality Management students, the Restaurant at Kellogg Ranch had a long history of serving beer and wine on campus. Additionally, the university also had a pizzeria, Round Table Pizza, which was centrally located on campus, and also served beer. According to Ortiz, the decision to allow Round Table Pizza to serve beer was not without significant oversight.

> In our negotiations, the pizzeria requested that we have 2 beer taps in the pizzeria. And, so, we told them that we would do that if they would allow us to monitor the consumption. And we said that if at the end of the year we found that students were sitting around drinking and it was interfering with the students in terms of

what they were supposed to be doing, then we would have the right to say that the taps are out.

As described by multiple interviewees, these restaurants served as a baseline for anticipated consumption if they were to establish a brewery and brewpub on campus. Because of their experience with the venture that did not work (Blazing Saddles) and the ones that did (The Restaurant at Kellogg Ranch and Round Table Pizza), administrators felt they had reasonable expectations how a brewery and brewpub would impact campus life. As Ortiz described, "Given what we knew in terms of the use of beer and alcohol on campus, our experience showed that it was not going to be a big issue. Over the period of time I was there, it wasn't. I believe it continues to be a non-issue."

Understanding the student population. As stated earlier, in 2017, Cal Poly Pomona had an enrollment of 25,984, with 24,314 undergraduate students and 1,580 graduate students. While Cal Poly Pomona has a large student population, there is a significant portion of students who commute. And while there has been a push to have larger numbers of students live on campus, Ortiz noted that only about 3,500 students currently live on campus. As Interim Associate Vice President and Dean of Students, Benardo Dargan, described, "The majority of the population either isn't of drinking age or isn't on campus." Additionally, interviewees noted that, for the most part, the type of drinking behavior noted at other universities, was not consistent with Cal Poly Pomona students. As Dargan noted:

> Our students are different. They are just hard working students and are thankful for what they have. They just have other things on their mind. They are just differently focused. We have a lot of non-traditional students who don't

> experience that on-campus living. So, the makeup of our campus community is entirely different. And like I said, they are so employment and career-focused, they just don't seem to have the time for [overconsumption].

Godfrey shared a similar sentiment, "Do we have students who have alcohol issues at times? Yeah, well they are turning 21 and those things happen. But, it's not consistent and isn't a frequent issue like on other campuses." In reviewing Cal Poly Pomona's 2019 Campus Security Report, there is evidence to support this characterization of students. Between 2016 and 2018, the average number of arrests related to alcohol on Cal Poly Pomona's campus had been 1.3. During that same time period, the average number of referrals/disciplinary actions for alcohol use had been 119.6. Comparing this data to other 4-year public universities with over 10,000 students enrolled during the same time period, the average number of arrests related to alcohol had been 36. For referrals/disciplinary actions, the average for 4-year public universities with at least 10,000 students has been 221 (U.S. Department of Education, n.d.). In both arrests and referrals/disciplinary action, Cal Poly Pomona is well below the national average. Charlene Ashton, an Associate Director in the College of the Extended University, noted student values as being part of the difference. As Ashton described, "It all goes back to the students and their values. I think most of the students have a sense of responsibility. They don't want to be and choose not to be disruptive."

Campus Culture. Similar to the student population, the campus culture is also an environmental component which is helpful to understand. Interviewees consistently noted a campus culture that did not support or reinforce unhealthy drinking habits. As Storey described:

> This is a good campus. I have been [at other campuses] and everything is crazy because of sports. They have drinking and tailgating that starts on a Friday afternoon and doesn't end until Sunday morning. This type of environment fosters the abuse of alcohol. We are not that type of campus. We are a very diverse campus. You really don't see that kind of drinking on our campus.

Dargan similarly noted:

> I have worked at other campuses and it has been a very different experience. They had a much different drinking culture on campus. It's like night and day between that and here. That sort of drinking behavior is just not part of the culture on campus. That culture can change, though, from year to year. But for now, it doesn't look like it's going to be any different. I don't know what kind of magic is happening here.

Leadership. Another environmental component that emerged as a key piece in moving Innovation Brew Works forward was leadership. This idea seemed to move forward without significant pushback because of known and trusted leadership, both at the university and at the foundation level. At the time, Cal Poly Pomona's President had been with the university for 6 years and the foundation's Executive Director had been there for 15 years. According to Storey, their leadership history helped moved this project from concept to reality.

> Luckily, I had a President who had been here for 6 to 7 years and had worked with me. We had been able to do several projects together so he trusted me. I think that always helps. New administration and a new president, it would have been a tougher sell. We had a good relationship with the foundation board. I think

> the President has a lot to do with how that works. I always thought we'd have objections, but we never had them. They just didn't object. They knew us and trusted that we knew what we were doing.

Similarly, Ortiz expected that selling the board and the community on the concept of an on-campus brewery would be challenging. However, Ortiz believed they built on a history of prudent decision making.

> I actually don't remember much issue with getting support to have [Innovation Brew Works] built once we laid out the educational value and the opportunities for students in the Hospitality College. I think everyone trusted that we were doing this with at least some focus of education in mind. I expected more blow back, but we just didn't have more. I know I was prepared for more.

Physical Location. The last environmental factor that seemed to help in moving this concept forward and that has helped to maintain a safe environment was the physical location of Innovation Brew Works. As stated earlier, Innovation Brew Works is located in Innovation Village, which is on the fringe of campus. As Ortiz described:

> We weren't plopping this down in the center of campus. Having it in a position where it was also across the street from resident facilities that housed only upper division students and graduate students who have a legal right to drink alcohol if they choose to, certainly helped as well. We also set the hours of operation. We would be open early and we wouldn't be open late. We made those plans in advance.

The physical location stood out to me the first time I visited Innovation Brew Works. It was actually the first night I arrived in Pomona. While it was adjacent to

student housing as described above, it did not have the feeling of being on campus. The buildings surrounding Innovation Brew Works were fairly nondescript and those that were, were not actual buildings housed by Cal Poly Pomona programs, services or students. Instead, the buildings closest were those housed by entities leasing space in Innovation Village. In the light of day, the center of campus did feel somewhat closer. However, Innovation Brew Works was far less convenient than some of the other student eateries and amenities. In addition to being close to upper-level students, the brewery and brewpub's location in Innovation Village also helped from a financial and longevity standpoint. As Ortiz described:

> Innovation Village has a large number of employees that work for Southern California Edison and a large number of other businesses as well. Now, they have the opportunity to not only come over and have lunch, but they can also come by and have a beer after work. This had large revenue potential for Innovation Brew Works.

As described above, the Cal Poly Pomona campus environment played a significant role in establishing Innovation Brew Works. Here, again, the environment includes much more than Innovation Brew Works' physical location. It also includes students, culture, decision makers, and previous decisions made by the university. In addition to playing a significant role in its creation, interviews demonstrated that environment continues to play a significant role in its operation on campus, both in terms of fiscal viability and maintaining student safety.

Theme 2: Administrative Control and Oversight. A second theme that emerged from the interviews that allowed for successful integration into the Cal Poly

Pomona campus is administrative control and oversight. Cal Poly Pomona administrators carefully controlled the rollout, messaging, and the operation of Innovation Brew Works. To effectively manage the creation of Innovation Brew Works, which was fraught with ethical concerns, administrators took a hands-on approach and have remained involved in the brewery's operations.

Teaching responsibility. One of the strongest and consistent areas of messaging in rolling out and operating Innovation Brew Works has been in teaching the responsible consumption of alcohol. In addition to this being a consistent message throughout interviews, it was also a passionate message. As Melody Young, Brewery and Brewpub Manager, noted:

> Drinking isn't the problem. Alcohol isn't the problem. It is overdrinking and using it for whatever reasons that cause overdrinking. We do not encourage overserving or overdrinking by any means. We are there to be a positive influence. These students can be at the age when they are discovering alcohol so we want to be a positive example of how it's appropriately consumed.

Interviewees consistently noted that the university had a role in teaching responsibility. While this perceived responsibility seemed like it would have been present regardless of whether Innovation Brew Works had been created, its creation seemed to have increased the university's role. As Ortiz noted, "[Responsibility] is part of the learning and maturation process. If you are consuming alcohol, there is a responsibility that goes with it. Teaching students what that responsibility is, not ignoring it, is an important aspect of having this on campus."

Interviewees also noted a cultural aspect of teaching responsible consumption of alcohol. Here, interviewees seemed to argue that the drinking culture in the United States, as opposed to abroad, has created a need for universities to educate on responsible drinking. As Williams noted:

> I think that drinking should occur in the household with parents under supervision and with explanations and experiences. That way, when you get into a college situation where I am old enough and alcohol is readily accessible, I may be more likely to avoid binge drinking. That is the issue we have in the United States. I think that is more of a social issue. It's a social problem as opposed to an individual problem.

Dargan similarly noted the differences in approach between college students' drinking in the United States versus universities abroad.

> Whenever I am out of the country visiting other schools, there are places to drink and almost full out bars on campus. As a student there, you may go have a drink between class or after class. It's not a big deal. In the US, it has become a counterproductive situation where the culture surrounding alcohol, students drink and overdo it. It seems to be a level of immaturity, not being able to drink responsibly. Maybe it's an expectation. I don't know.

Eric Bassett, former student and current brewmaster, noted the opportunity this provides Cal Poly Pomona to promote responsible drinking and to model that responsible behavior in a safe environment.

> It allows education for something that's not really a focus in America. So you're 21, alright, go out in the world. Whereas, in other countries, you are drinking at an

earlier age and you have an appreciation for it. Here, it's just kind of a not talked about activity that adults consume. Here, at the college, we are able to offer a safe environment for students who many not really have parents or friends that drink, but want to learn more. We can show them that it's not something you buy for a few bucks to get drunk. That's one of the things we are trying to explain.

Weighing benefits versus harm. The creation of an on-campus brewery and brewpub can be a challenging prospect given the relationship between higher education and alcohol. Another area of consistent focus in interviews was the idea that the benefit of the brewery and brewpub needed to outweigh the potential harm. As discussed earlier, interviewees felt there was minimal risk of harm to the student population or culture by creating an on-campus brewery and brewpub. As discussed above, one major benefit Cal Poly Pomona administrators saw was being able to teach responsible alcohol consumption. Additionally, several interviewees described Innovation Brew Works as a benefit to the social environment on campus. As Ashton described, "It's really not that outside of the box because it's just a way for people to gather, to have social opportunities." Moreover, Ortiz took this idea a step further, stating that Innovation Brew Works has helped to create a better sense of community for some students. As Ortiz stated:

> This has helped created a whole new community by providing a place for students to meet. It brings them on campus as well in social setting to make them feel more connected than just going to school there. I think it can be really important for those students who don't live on campus. It's helped to broaden the campus community.

Marketing ethically. Another area that had significant administrative oversight was in marketing. Administrators that were interviewed consistently noted the importance of how Innovation Brew Works was marketed. Obviously, they wanted to market that they were a brewery, but felt it was just as important to market that they were a restaurant. As Belisaria Sidener-Mercado, former student and current manager, described:

> A lot of the marketing is focused on the food. The beer is definitely present and there are plenty of pictures of it. But a lot of the marketing does focus on the food. I think that is because they try to promote the idea of come eat and have a drink, not come here and have a bunch of drinks. You're marketing the beer, but you're not marketing beer.

Similarly, Storey described the marketing of Innovation Brew Works as a delicate balance in letting students and the community know it is there, while not overly promoting the consumption of alcohol. As Storey stated:

> It was challenging to decide exactly how much to market. You don't want to go over the top about the beer, but you want to be very clear about the type of facility it is. That said, we weren't going to be advertising any "happy hours." Instead, we wanted to focus on the educational and food aspects in our advertising.

In reviewing the brewery's website, you can see their approach in action. The large scrolling picture marquee of Innovation Brew Works does not actually show any pictures of beer or of consumption of beer. Instead, website users see pictures of the facility, including brewing equipment, multiple images of food, merchandise, and past brewing awards received. Below the scrolling marquee, the majority of information

describes Innovation Brew Works relation to Cal Poly Pomona and also to the educational mission of the brewery. Again, actual information about the brewed beer is relatively minimal. According to multiple interviewees, especially current and past students, they felt as though marketing had actually been modest in breadth. In actuality, they argued, there were large groups of students who were unaware that the university had a brewery on campus. As Sidener-Mercado described:

> Well, what's funny, is that most students don't really know [Innovation Brew Works] exists. When I first started working there, people were like, 'We have a brewery? Where is that?' I didn't even know it was here until someone suggested that I work here. I said the same thing, 'What? We have a brewery?'

As a former student as well, Storey had a similar perspective. Storey said this is one of the reasons Innovation Brew Works has had to focus on a larger customer base.

> Most of [the students] don't know about the brewery. We are not really a college drinking school to start with. It's really more of a commuter school. A lot of people come and eat and don't really stay around too locally. That's why we have had to appeal to a larger market. The school has a bunch of ways to pull people in, but this hasn't been a focal point of why someone should come here. They likely haven't seen too much about us.

Training staff properly. Another area that had significant administrative oversight was in the area of staff training. In all interviewers involved in setting up the brewery and with those that currently work at the brewery, safety was a major highlight. Not only do they promote safety in their educational programs, but the brewery has extensive training for all staff the serve alcohol. As Bassett noted:

> Every staff member that works at Innovation Brew Works goes through ServSafe training when they first start. [Staff] get education on how much you can drink and when to cut people off. We are trying to offer a safe place for students to come and drink. We promote a more laid back or calm approach to drinking. People consume for quality, not for quantity.

The ServSafe program is an industry standard for training developed by the National Restaurant Association and experts who have experience with the risks in serving alcohol. I was actually able to experience firsthand some of the safety measures at Innovation Brew Works. First, I was asked for my ID card each and every time I ordered an alcoholic beverage, as was my brother. With me being 36 and my brother being 42, we were fairly safe for passing as 21-year-olds, but we were asked for identification each time. Additionally, I was not able to order a "round" of drinks for my brother and me unless he was there to accept the beer and show identification. For Storey, providing proper training and a safe environment was paramount to this being successful. One of the reasons, according to Storey, is that as a university, their brewery would be held to a different standard.

> It's a very large university, but a very close knit community. We are held to the same standards of serving as places off-campus. However, if some bar or restaurant gets shut down or has a problem, no one hears about it. If someone comes in and shuts me down for doing something here, everyone in the university and our community will know about it. In that way, we have to hold ourselves to a much higher standard.

As described above, administrative oversight and control was essential in the creation of Innovation Brew Works and the continued safety of its operations. Additionally, the administrative oversight helped ensure that Innovation Brew Works was promoted and operated as intended.

Theme 3: Innovation Brew Works' Identity. A third theme that helped in the creation and that continues to impact the direction of Innovation Brew Works relates to establishing an identity. Throughout my interviews, there seemed to be a conflict between understanding the Innovation Brew Works' identity. In other words, is it an amenity or an academic building? Is it educational or a business? Is it an opportunity to further the town and gown relationship? This seems to be an evolving question for Innovation Brew Works.

Amenity versus academics. As talked about during Chapter 1 and Chapter 2, competition for students is fierce. Universities are constantly evaluating their facilities and seeking ways to attract and retain students. As discussed, athletic facilities are perfect examples of how universities have competed with each other over the past decade. As there becomes less and less separation in those facilities, universities have looked at other amenities to attract and retain students. In the case of Innovation Brew Works, interviewees consistently identified aspects of both amenity and academics. As Neilson described:

> [Innovation Brew Works] has two faces in my mind. Face number one is public facing in that it faces out into the community. That messaging gets wrapped into driving revenue and drawing the community here. Driving the revenue will help sustain the program and help grow it. The second face, the campus facing side, is

more about education, crafting an education, our tagline. It's more about using this as a centerpiece to educate students. We are connecting to Cal Poly with the learn by doing aspect.

Though interviewees described Innovation Brew Works as both an amenity and an academic building, responses did seem to be amenity leaning. As Godfrey described:

I see it as more of an amenity, especially in its current state. While it's attached to the College of the Extended University and Collins College of Hospitality Management, those relationships are still growing. Historically, [the Innovation Brew Works space] had been a number of different things. Now, it's a workable business that is doing very well. I still see it as an amenity that happens to have some amazing learning opportunities. It takes advantage of the polytechnic approach and it certainly has plenty of learn by doing, not only on the food and beverage side, but in other areas as well.

In my experience, the question of Innovation Brew Works being an amenity or academic building seemed driven by the time of day you were there and the perspective you had in visiting. As a researcher, I found myself seeking the educational aspects. During the day, it was easiest to see them. Depending on where you were sitting, you could hear instruction in either the brewery operations area or discussions between Innovation Brew Works' staff members. In the evening, it was a little bit harder to observe. It seemed as though most of the preparation (brewing and food preparation) had been accomplished and it turned into more of an amenity and service operation.

Business versus academics. Similar to the conflict noted between amenity and academics, there is a conflict between Innovation Brew Works as an academic building

versus a business. Here, I am using the term conflict more to describe the incompatibility between viewing this as an academic enterprise and a business enterprise, not that there were two strongly opposing viewpoints. Bassett provided the following summation of the conflict:

> There is a bigger picture for [administration]. [Innovation Brew Works] is just a little project. It's not that they don't give their full focus to it, but there are other entities on campus that are making way more than us that are going to get a lot larger of the focus. Like Innovation Village over here-that's easy revenue that they don't really need to think about. Here, there is more of the focus on the education side versus looking at this for significant business growth. That's where it becomes sort of difficult. Is it all education or is it a business? We try to shoot down the middle, but it definitely makes it harder.

Given the growth and diversity of the craft beer industry, breweries have had to be nimble and responsive to trends within the craft beer community. While looking at Innovation Brew Works' diverse tap list demonstrates their adaptability, Young described the importance of understanding the decision making process.

> I wasn't prepared for the decision making process when I first started here. It took a lot of hair pulling at first. I have to talk to three people just to put a button on the register? Once you learn the process, there is a great support system there. But I do have to remind myself that this is the university's brewery and I am just helping them run it.

In both business and at universities, retention is often a consistent topic. Whether it is retaining students or retaining valuable employees, consistency helps. For academics,

consistency helps from a budgeting perspective, while consistency helps businesses to provide a consistent product and consistent services. However, when students are also in a sense your employees, this presents challenges. As Neilson described:

> It's difficult because [Bassett] gets great students in, they move on and you start over. You train and then you retrain. [Bassett] is in a constant churn of trying to keep the operation going while trying to encourage students to grow. That dynamic exists every day.

It is a difficult balance to maintain. However, as Bassett described, you have to maintain some level of consistency in your brewing so your beer has an identity. In other words, if you have a beer you like, you expect it to taste the same as the time you had it before. According to Bassett, this a lesson that is particularly important in brewing.

> Since we have new students coming in her every few months, it's hard to be consistent to the brand. You have to keep yourself brand focused. It's actually a good lesson for the students there. Everyone wants to put their stamp on something they're a part of there. But if you are not dropping things consistently and around a central idea, it becomes difficult to identify who you are. This idea is a great lesson in quality control for students.

Town and gown relations. Another area that seems to be involved in establishing an identity for Innovation Brew Works is its relationship to the community. Innovation Brew Works is open to the public. Because of its location within Innovation Village, Cal Poly Pomona felt the brewery was well-suited for the public and also created more of a community with the city of Pomona. Ashton described Innovation Brew Works as the following:

> I think it's a place of pride. So when I have any out of town guests, I always take them to the brewery. I always say, 'you have to see our pub!' It's a place that you don't see on many university campuses across the country and it's a place for the community. There are tables full of students and tables of families. It's a nice mixture.

As Ortiz described, it's a way to potentially bring people back on campus or get people on campus for the first time.

> [Innovation Brew Works] brings a whole new community from the outside back to the campus as well as those who weren't Cal Poly Pomona alumni. It brings them back on campus in a social setting and hopefully helps connect them with the university. It has really strengthened our ties with the Pomona community, similar to how the [Restaurant at Kellogg Ranch] has.

Having spent significant time in the brewery, I had the opportunity to observe the clientele during a normal week on campus. From my observations, Innovation Brew Works seemed to have a diverse customer base. Whether it was lunch time, dinner time or time for a late dinner/drink, the customer composition appeared to be a mix of students and non-students. There were families having pizzas, friends having a drink over sandwiches and appetizers, or a couple of older adults having a drink. While other nights were louder than others (trivia night, for example), I observed town and gown mixing seamlessly. As you can see from above, establishing an identity was a major theme that emerged from my research. Additionally, it is clear that Innovation Brew Works is still in the process of establishing and refining their identity.

Theme 4: Mission. The final theme that emerged is Innovation Brew Works' commitment to the university's mission. Cal Poly Pomona's mission is defined as the following, "We cultivate success through a diverse culture of experiential learning, discovery, and innovation (About Cal Poly Pomona)." Cal Poly Pomona's Latin motto, *Instrumentum Disciplinae*, which translates to "Application of Knowledge" takes this learn-by-doing approach a step further. The concept of learn-by-doing was present and centered in all interviews, including administrators, staff, and students. Learn by doing was actually the most commonly used phrase across all interviews. Additionally, when you first walk into Innovation Brew Works, one of the first things you will see is a large sign above the ordering counter that reads, "Crafting an Education." It is the first of many reminders that this is an educational brewery.

Experiential learning. There is a clear focus on a hands-on, learn by doing approach across the Cal Poly Pomona campus. It is an integral part of the campus culture and one that everyone has bought into. According to Storey, Innovation Brew Works provides another avenue for experiential learning for students.

> The mission at Innovation Brew Works is the same as the mission for the whole university, it's learn by doing. It's just a different playground. It's a business that emphasizes cooperation and gives students an opportunity to not only learn the business, but also learn the craft. We try to get students in all of the different areas of the operations. We try to utilize students' unique talents and let them run with ideas. They also get a chance to develop some of those soft skills that are hard to teach in a classroom like communication and teamwork.

According to Ortiz, the approach they have taken at Innovation Brew Works is the same approach they have taken at other locations on campus, including their Restaurant at the Kellogg Ranch.

> What happens and I tell people all the time, they say, well, these students are working in a kitchen. I say, well, yes, they are working in a kitchen, but they aren't learning how to shred lettuce. They are learning and figuring out how many heads of lettuce they need to shred for a group of 100 people and what that's going to cost. They are learning the economics of running a restaurant. These are relevant, real-world experiences. These are the same sorts of lessons they learn at Innovation Brew Works.

Similarly, Neilson argued that it is these types of experiences that prepare students for employment.

> The mission of Innovation Brew Works is crafting an education. Its foundation is based in the Cal Poly Pomona mission of learn by doing. It's integrated learning where students from multiple disciplines can come and work in an environment where they get to apply the things they learn in the classroom to the workplace. It gets them real world experiences they can take into the world to help them succeed. It's about the students learning and applying their knowledge.

Further solidifying Innovation Brew Works as a hub for experiential learning were the comments from students who had worked or were working there. There were clear parallels between administrator responses and student responses. The similarities in ways that the experiences prepared them for employment and the importance of having hands-on experiences were uncanny. As Ortiz described:

> I didn't realize it at the time, but working at [Innovation Brew Works] definitely helped prepare me [for employment]. The reason I ended up [in the Collins College of Hospitality Management] was that I wanted to go to culinary school, but my mom wanted me to get a degree. That's how I ended up there. Through that, though, I got experience with ordering, taking inventory, all that kind of stuff. I got experience with cost control and all of those things. I had learned about those things in school, but I got to use them in a real setting. I also go to work on menu development, making items, testing them, tweaking. Eventually, they asked me to be a lead so I got to work on building my leadership style. I couldn't have gotten that experience anywhere else.

Interdisciplinary Learning. Another area that emerged was the value of interdisciplinary learning. Particularly interesting was where this emerged during interviews. While administrators did not mention much in regards to interdisciplinary learning, all students interviewed (current and past) referenced the value of learning and helping run a business with colleagues from other disciplines. As Sidener-Mercado described:

> You don't have to be a brewery student or hospitality student to work at [Innovation Brew Works]. Actually, it's interesting, most students that work at [Innovation Brew Works] aren't hospitality majors or anything like that. My view on everything and their view on everything is so different. That can sometimes create conflict, but it can also help with perspective.

This interdisciplinary approach lent itself to improvements at the brewery and expanding in areas that they had not initially planned. Students and brewery staff all had

different stories of contributions employees from different disciplines had made to the brewery. Whether it was an aeronautical engineer that was helping to build new educational equipment, a liberal studies major who wanted to be a history teacher creating a "trivia night," or a biology major that wanted to help set up quality control measures for the brewery, Innovation Brew Works listened to their students to help improve their operations. Utilizing students, according to Storey, is an area we could improve upon across higher education.

> I don't know why we don't utilize our students more. We have students involved in so many areas of our operations and they have such great ideas. But we don't always think of them first. If directors and managers leverage students and their ideas, you could really make improvements on campus in a substantial way. When you learn to bring different influences in, you get a great product.

As described above, Innovation Brew Works has been a strong addition to Cal Poly Pomona's tradition of learn by doing. With the brewery only in its infancy, administrators and students believe the opportunities for students are only going to grow.

Summary

In this chapter, I provided a thorough description of the results of my research project, *What can be learned from the country's first university owned brewery and brewpub?* First, I provided a description of the Cal Poly Pomona campus as well as Innovation Brew Works. Next, I provided a narrative on the creation of Innovation Brew Works, from concept to completion. Here, I combined excerpts from multiple interview sources to provide a timeline of the process and significant milestones. Next, I described the interview participants as well as a brief description of how those participants were

selected. Following that description, I provided a detailed summary of how I analyzed the interview transcripts into codes and categories. As a result of the interviews, document analysis and observation, four themes emerged. In each theme, additional subthemes were identified and were described in their relation to the larger theme. The first theme that emerged centered on the importance of environment in the decision making process to establish Innovation Brew Works. The second theme that emerged related to administrative oversight and control. Here, I provided descriptions of the importance of a hands-on approach by administrators to consider possible ethical implications of having a brewery on campus and also to ensure the safety of the brewery's operations. The third theme that emerged related to establishing the brewery's identity. This theme is somewhat fluid and developing as Innovation Brew Works continues to grow and mature. The fourth theme I discussed was the relation to the university's mission through experiential and interdisciplinary learning. Branded as an educational brewery, I described the brewery's contributions to providing hands-on experiences for students.

Chapter Five

Discussion

Introduction

Chapter 5 begins with a summary of my dissertation study. Next, I provide a discussion of the major findings of the study and how they relate to the current literature. Following the discussion of the major findings, I link this dissertation study with Kolb's Theory on Experiential Learning, my theoretical framework. Next, I provide a summary of the implications of the current study. I then describe this study's contributions to the existing literature. From there, I discuss my recommendations for future research. Next, I discuss limitations of the current study. Lastly, I provide some concluding remarks.

Summary of the Study

This dissertation research sought an answer to the general question, What can be learned from the country's first university owned brewery and brewpub? With that as the overarching general research question, this dissertation study additionally sought to answer the following more specific research sub-questions:

- Given the documented negative consequences of drinking alcohol on college campuses, how was the decision reached to create an on-campus brewery and brewpub?
- What role, if any, did ethical considerations have in the discussion to create an on-campus brewery and brewpub?
- How has the brewery and brewpub contributed to the on-campus environment?
- How has the brewery and brewpub contributed to the academic environment and employability of students?

For the purpose of this qualitative research project, I utilized a case study methodology, researching Cal Poly Pomona's Innovation Brew Works. Qualitative data was primarily collected during a four-day, in-person site visit to Cal Poly Pomona, located in Pomona, California in February 2020. Cal Poly Pomona was chosen for this case study as they were the first university in the country to have an operational brewery and brewpub on a college campus. Data was collected through interviews (in-person and telephone), observation, and document analysis.

For the interviews, three groups of individuals served as data points: administrators, students (current and past), and faculty/instructors. I utilized a non-probability, purposive sampling known as snowball sampling to select participants. Those interviewed represented various levels of experience, perspective, and responsibility for Innovation Brew Works and Cal Poly Pomona. I utilized an open-ended question format for face-to-face and telephone interviews.

I spent approximately 5 hours during my site visit for observation data collection purposes. Here, I gained a better understanding of the relationship between Innovation Brew Works, the campus, and the greater Pomona community. Additionally, I saw firsthand the experiential learning opportunities available and the interactions between student workers and the business environment.

The third data point I used during the data collection process was document analysis. During the process of document analysis I reviewed: Board of Trustees meeting minutes; the Innovation Brew Works website; the Cal Poly Pomona main website; the College of the Extended University and the Collins College of Hospitality Management websites;

the most recent Cal Poly Pomona Campus Security Report; and Innovation Brew Works marketing and promotional materials during my site visit.

Following the data collection, I spent significant time analyzing the data. For each data point (interviews, observation and document analysis), I kept a codebook where I coded and categorized quotes, expressions and notes. After a two-step process of cutting and sorting quotes and expressions related to my questions and categories, themes from my interviews emerged. I utilized my observational and document analysis data to enrich the description of the emergent themes from the interviews. As a result of this data analysis, four major themes emerged as having been essential in the creation and operation of Innovation Brew Works. These themes included: the environment; administrative control and oversight; establishing Innovation Brew Works' identity; and a mission-centered focus.

Discussion of Findings

The following discussion will revolve around the thematic findings of this dissertation. Again, these themes included: the environment; administrative control and oversight; establishing Innovation Brew Works' identity; and a mission-centered focus. While these themes will drive much of the discussion, I hope to add to the broader, overarching question which initiated this study, What can be learned from the country's first university owned brewery and brewpub?

Environment. The campus environment at Cal Poly Pomona has been central to Innovation Brew Works' launch and continued success. For the purposes of this dissertation study, the campus environment refers to more than just the physical location. In looking at this specific case, there are an abundance of environmental factors that

enabled this project to move forward successfully. These factors included: Cal Poly Pomona's past precedent of serving alcohol on campus; their understanding of the student population; their understanding of the campus culture; Innovation Brew Works' physical location; and the leadership.

In reviewing the literature, there were substantial red flags for creating a facility like Innovation Brew Works on college campuses. Past research seemed to provide definitive evidence that physical availability of alcohol directly correlated to higher rates of problems associated with alcohol on college campuses. Kuo, Wechsler, Greenberg & Lee (2003) found that environmental factors such as availability, sales prices, promotions, and advertising were directly related to higher binge drinking rates on college campuses. Similarly, Gruenewald & Millar (1993) found that physical availability directly influenced the rates of alcohol consumption and related problems. Both of these studies actually advocated for controlling the physical availability of alcohol on campus.

While not specifically related to alcohol, Strange and Banning (1987) provided insight into how physical features could impact behavior and the campus environment. According to Strange and Banning, there is a direct link between the built environment and the behavior within it. As they describe, "People move in a certain direction, sit at one end of a room, exit a building in a predictable pattern presumably because the physical structure and design allow few other options," (p. 13). Moreover, Strange and Banning argue that "Whether natural or synthetic, the physical aspects of any campus environment offer many possibilities for human response, rendering some behaviors more probable than others" (p. 13). In this sense, it seems Strange and Banning would argue that the very creation of a

brewery on campus could impact student drinking behaviors. In other words, because the brewery exists, students will drink at a higher rate than if it did not exist.

Past precedent of serving alcohol on campus. It is hard to argue that an on-campus brewery and brewpub does not increase the availability and opportunity for alcohol consumption on campus. What does become challenging to argue is if that the availability or opportunity is problematic on Cal Poly Pomona's campus. As mentioned in my findings, Cal Poly Pomona administrators believed they had a good understanding of alcohol consumption by students and the associated campus culture. It turns out that this belief was rooted in both their experience with serving alcohol on campus and the data available to them. First, they had successful examples of serving alcohol on campus, both at the Restaurant at Kellogg Ranch and at Round Table Pizza. Specifically looking at Round Table Pizza, administrators had closely monitored alcohol consumption, sales and adverse events during its first year of operation on campus.

Understanding the student population. Administrators also seemed to understand several other student characteristics which significantly impacted the campus environment. According to the NIAAA (2015), alcohol consumption is the highest among students living in fraternities and sororities and lowest among commuting students. This fits perfectly with the composition of Cal Poly Pomona students, which has a modest Greek life and a high living off-campus/commuting percentage. According to Cal Poly Pomona's Greek Life website (2019), just 2% of the student population are active in fraternities or sororities. Moreover, according to Cal Poly Pomona (General Questions, 2019), approximately 2,400 students live on campus with University Housing Services; this represents approximately 10% of the Cal Poly Pomona student population. In other words, 90% of students live off-

campus/commute. These student population characteristics seems to seamlessly support previous literature on environmental factors affecting student alcohol consumption.

Understanding the campus culture. In addition to these successful campus ventures, the University also had data from the Campus Security Report (n.d.) which demonstrated significantly lower arrests and referrals/disciplinary actions for alcohol-related issues on campus compared to similarly sized universities. Between 2016 and 2018, the average number of arrests related to alcohol on Cal Poly Pomona's campus was 1.3. During that same time period, the average number of referrals/disciplinary actions for alcohol use was 120. Comparing this data to other 4-year public universities with over 10,000 students enrolled during the same time period, the average number of arrests related to alcohol was 36. For referrals/disciplinary actions, the average for 4-year public universities with at least 10,000 students was 221 (U.S. Department of Education, n.d.). In both arrests and referrals/disciplinary action, Cal Poly Pomona is well below the national average. Additionally, there was actually a decrease in the average number of alcohol-related arrests and disciplinary actions at Cal Poly Pomona since Innovation Brew Works opened compared to the three years prior to its opening. Between 2011 and 2013, the average number of alcohol-related arrests at Cal Poly Pomona was 2, while the average number of referrals/disciplinary action was 223. Since opening in 2014 to the most recent available data in 2018, the average number of alcohol-related arrests each year has been 1.4, while the average number of referrals/disciplinary action has been 117 (U.S. Department of Education, n.d.).

Innovation Brew Works' Physical Location. Another environmental component that was prevalent in the literature and emerged during interviews was related to the

physical location of Innovation Brew Works. Prior research by Sheehan, Lau-Barraco, and Linden (2013) found that college student drinking was influenced by the environment, such that "heavy drinking increases as the availability of alcohol, offers of alcohol, and drinking near student housing increases" (p. 449). To combat this phenomenon, administrators paid particular attention to the physical location of Innovation Brew Works. During interviews, several interviewees noted its location being on the outskirts of campus. Additionally, interviewees noted that the only university-owned housing in close proximity to Innovation Brew Works was upper-level student housing. While at first glance this seems to be just coincidental, it was consistently mentioned by administrators involved in its creation as being one of the reasons they were able to move this project forward. Having spent time at Innovation Brew Works, it does feel less like a campus bar and more like a Pomona community brewery.

According to the literature, the environment surrounding the availability of alcohol on university campuses and university campus events has relaxed significantly in the recent past. As noted by Voas, Johnson, Turrisi, Taylor, Honts, & Nelson (2008), there has been a "countervailing trend to increase the events, if not the venues, where alcohol can be sold to raise revenues for campus programs and athletic teams" (p. 2). Additionally, more than one-third of all Division I Football Bowl Subdivision (FBS) schools now sell beer at their football games (Nietzel, 2018). As Smith and Lefton (2017) note, "Selling beer in-venue is considered by many administrators as a way of providing a better fan experience, or at least an experience that will keep them inside the stadium longer" (para. 13). In this sense, Innovation Brew Works is just Cal Poly Pomona's approach to contribute to this trend. Instead, one could argue, that they have just done it in a way that is consistent with its

academic mission of learn-by-doing. However, we will flesh out that idea later in the discussion.

Leadership. Leadership during the decision making process and implementation phase of Innovation Brew Works was found to be vitally important. In looking at the literature surrounding making difficult decisions, Bornstein (2009) noted:

> When facing an ethical dilemma, I asked myself the following questions: Which course of action is consistent with the college's culture, policies, and prior decisions, professional standards and my personal values? Will that action have a positive impact on the college? Finally, will it serve as an appropriate template for future actions? (Bornstein, 2009, p. 1).

In looking at the quotes from the leaders at the time Innovation Brew Works was being created, there are clear parallels with this message. Leadership was in-tune with the college's culture. The decision to move this project forward was in-line with prior decisions. It seemed as though the decision making tree almost followed this philosophy directly. Additionally, this project benefited from veteran leadership. Both the President and the Executive Director of the Foundation at the time had been in their respective positions for a significant amount of time. As stated before, they had credibility and had built trust across campus. This trust and credibility allowed them the latitude to try something completely out of the ordinary. Both the President and the Executive Director acknowledged that the process to move this project forward likely would have been substantially different had they not built trust between them and the campus community and Cal Poly Pomona foundation board.

Administrative Control and Oversight. Another theme that emerged which proved to be impactful in creating and maintaining Innovation Brew Works' operations was related to administrative oversight and control. Throughout the process of creating Innovation Brew Works to current decision making, administrators have played an important role in developing the brewery's policies and its image on campus. While there were a number of factors related to administrative control and oversight, I noticed particular attention paid to the idea of teaching responsible drinking, weighing the benefits versus harm of having a brewery, marketing ethically, and training staff properly.

Teaching responsible drinking. In their 2016 study, Glassman, Kruger, Paprzycki, Blavos, Hutzelman, and Diehr looked at which type of alcohol consumption messaging (abstinence, social norms, or responsible drinking) was most effective in reducing alcohol consumption. While abstinence proved to be the most effective method in reducing alcohol consumption in their study, all methods were proven to be helpful. The approach of advocating for responsible drinking was noted by interviewees as being the preferred method of education related to alcohol consumption. This contradicts past literature which has suggested that abstinence was the most effective method. To me, given the statistics related to alcohol use on college campuses, this seems like an unrealistic approach to address drinking on college campuses. However, where most messaging falls short is actually providing a model for responsible alcohol consumption. I am sure we are all familiar with the commercials that advocate to please drink responsibly. Is this disclaimer actually effective? Are we to assume that students/consumers will see this and immediately demonstrate behavior that is consistent

with responsible consumption? Or, has the mere inclusion of a disclaimer absolved the creator of responsibility? I suppose, at best, Innovation Brew Works can serve as a model image of responsible alcohol consumption. That does, however, place significant weight onto the shoulders of a brewery that is being largely run by those they are being asked to police: students.

Weighing the benefits versus harm of having a brewery. As this dissertation study took shape, one of the areas I became particularly interested in was the decision making process for having a brewery on a college campus. Given the relationship between higher education and alcohol, I questioned how a university could argue that it was ethically reasonable to move this project forward. One of the first references I read was Kitchener's (1985) "Ethical Principles and Ethical Decisions in Student Affairs." In it, Kitchener (1985) outlines five principles to consider during the decision making process. Among those five principles were the principles of doing no harm and of benefiting others. It is here that Kitchener (1985) argues that it is "necessary to weigh doing no harm to a particular individual or group of individuals against benefiting others or the institution as a whole" (p. 22). This concept became abundantly important as it serves as the framework to reinforce the creation of Innovation Brew Works. A brewery and brewpub on a college campus is not inherently wrong. Given the structure of this brewery, with its educational focus, it had the potential to provide meaningful experiences to students from a number of different disciplines. In actuality, the brewery and brewpub only had the potential to do harm if they were used in an unhealthy manner. However, administrators had to weigh the benefits to the students and community versus the potential harm. Ultimately, administrators would have to use this benefit versus harm

analysis in many of the decisions related to the brewery, from the hours of operation to the pricing of the products. Because the brewery sold a product that had the potential to cause harm, each decision needed to be weighed against the potential benefits. As was discussed above in Bornstein (2009) and will be discussed below in Mitchell (2012) and Trent & Pollard (2019), in weighing benefits versus harm, mission becomes critical in evaluating opportunities and appraising decisions. This evaluative and appraisal process does not occur in a vacuum. In the case of Innovation Brew Works, there was careful consideration of potential harm, while concurrently rooting the project in Cal Poly Pomona's learning by doing philosophy.

Marketing ethically. Another area that emerged during interviews that had significant administrative oversight and control was related to marketing. As noted earlier Kuo et al. (2003) found that environmental factors such as availability, sales prices, promotions, and advertising were directly related to higher binge drinking rates on college campuses. It was clear in talking with Innovation Brew Works administrators that they understood the impact of marketing on the development of the brewery's image. Because of this, marketing materials tended to focus on food, rather than beverages. Additionally, they were careful about marketing drink specials. There were not going to be "happy hour" drink specials; that was not how they wanted to be known. When I walked into Innovation Brew Works for the first time, it felt more like a restaurant than a brewery. When I walked up to the counter, I did not see a line of taps with a draft listing above. Instead, I saw the station for making food and the menu for the restaurant. All the way to the left, two flat panel televisions over, I finally saw the draft list and taps a few steps behind. I should have asked (I did not), but that all seemed purposeful.

Innovation Brew Works' Identity. Another theme that emerged during this dissertation study was establishing Innovation Brew Works' identity. Is Innovation Brew Works an academic building? Is it an amenity to help compete with other institutions? Is it a business or an academic program? These questions, particularly if it is a business or academic program, seem to parallel the larger question of whether higher education itself is a business. My impression is that none of these singular labels fits Innovation Brew Works. As with other areas in higher education, it is complex and evolving. However, the fact that it cannot be singularly defined, as detailed in this dissertation, has made the development of Innovation Brew Works' identity challenging. That is not to say that it has not been successful, just that is not as simple a concept as it is at first glance.

Amenity versus academics. Literature has shown significant investment into student amenities, not necessarily instructional facilities, over the past decade. As noted by the Delta Cost Project's 2010 report, spending on student services outpaced that on instruction for the past decade for all post-secondary sectors. Additionally, Jacob, McCall, & Stange (2011) found that college spending on student activities, sports, and dormitories are significant predictors of college choice and more influential than instructional spending or academic support. What is perfect about Innovation Brew Works is its ability to straddle both being an amenity and an academic building. It is consistent with literature in that it "caters to students' desires for leisure" (Jacob et al., 2011, p.2), while satisfying an educational need within the community. As described above, the purpose of Innovation Brew Works is not singular. Interviewees consistently noted its dual purpose of being an amenity for students, while also being an educational

hub. In this sense, Innovation Brew Works satisfies both student desires and the academic mission.

Business versus academics. Similar to the exercise of defining Innovation Brew Works as an amenity or an academic building, the exercise of defining Innovation Brew Works as a business or academic program is also challenging. There is as much evidence to support Innovation Brew Works being a business as there is evidence of it being an academic program. Ultimately, like the amenity versus academic building argument, Innovation Brew Works has business and academics components.

Past research has shown the importance of student-run enterprises in academia. According to Avery and Marra (1992), student-run enterprises provide students with experience and an opportunity to develop their portfolio. The nature of these enterprises, though, demonstrates why they cannot be viewed simply as businesses. As Evans (2013) notes, "Though the experience has been fruitful for many students, the businesses themselves often struggle under their revolving cast of owners" (para. 8). In talking with the Innovation Brew Works staff, this was one of the universally noted challenges in operating the brewery. They struggle for consistency in operational support for their primary function: brewing. In no business model would this sort of arrangement be the model for efficiency and providing a consistent product. In this sense, the brewery can be viewed as an academic program, where the needs of the student are primary to the needs of the brewery.

There are certainly elements of being a business. Thinking about the evolution of the space Innovation Brew Works occupies, there was an emphasis on making the location profitable. Past efforts, such as a bookstore or coffee shop, were unsuccessful in

being financially sustainable. Similar to other businesses, they were not able to rely on a subsidy. Instead, Cal Poly Pomona moved on and looked for something that could be sustainable and drive revenue. What is interesting, though, is that there seems to be a ceiling for success. While administrators acknowledge that Innovation Brew Works has been a success, there does seem to be a feeling of being content. The brewery and brewpub seemed poised to grow, but are landlocked. Additionally, I noted during my interviews that Innovation Brew Works staff had plans to grow its distribution footprint and expand into canning its offerings. However, there does not seem to be any sense of urgency in planning for this proposed growth. For now, it seems that Cal Poly has achieved its goal of providing a location that is financial viable and that satisfies a need for the Innovation Village business community.

Mission. The Cal Poly Pomona mission has been integral to the creation and the continued operations of Innovation Brew Works. Cal Poly Pomona's Latin motto, *Instrumentum Discipinae,* translates to "Application of Knowledge," reflecting the university's learn-by-doing approach to academics. Across the Cal Poly Pomona campus, the learn-by-doing approach to education is evident, especially in the program areas for which they are most known, including hospitality management, agriculture, and architecture. The addition of Innovation Brew Works has served as an extension of this learn-by-doing philosophy, most notably for the brewing science programs and the hospitality management programs. The university's focus on experiential learning and interdisciplinary learning, including its use of Innovation Brew Works, is consistent with the approach to help students gain practical experience and improve their employability.

In my conversations with the decision makers involved in Innovation Brew Works, they discussed at great length the importance of rooting decision making in the university's mission. Trent & Pollard (2019) highlighted this well, quoting a former college president who stated, "Keep it simple. Keep it honest. Keep it focused on what is the mission; and where do we spend our money? We spend our money on our mission" (p. 70). This was consistent with my discussions I had with a former Cal Poly Pomona president. He believed that Innovation Brew Works has been successful because those involved have never lost sight of Cal Poly Pomona's learn-by-doing philosophy. Because that has been central to conversations surrounding the creation of Innovation Brew Works, its creation has only served to reinforce the university's mission on the Cal Poly Pomona campus.

Experiential learning. There is a large and growing body of research promoting the use of experiential learning in higher education. According to Kuh (2011), out of classroom experience provides an opportunity for synthesizing and integrating classroom material into a real world context. Additionally, research has consistently shown that experiential learning helps better prepare graduates for the workforce and their transition to the workforce (Gault, Redington & Schlager 2016 and Sykes 2016). Benefits for experiential learning opportunities extend past the student, with research also showing benefits to employers (Coco 2000, Degravel 2011, and Sykes 2011) and higher education institutions (Weible & McClure 2011, Trede & McEwen 2015, and Alpert, Heaney & Kuhn 2009).

One of the core functions of Innovation Brew Works has been to serve as a medium for experiential learning opportunities. The brewery, in its design, was created to

provide educational opportunities for students. At first, Innovation Brew Works largely contributed to the workforce by providing the brewing industry with assistant brewers. Cal Poly Pomona approached their educational offerings intelligently. They queried the brewing industry to gain a better sense of what the market needed. From there, they adjusted their educational programs accordingly. In addition, they looked at their current educational programs to see which would benefit from having hands-on experiences. As a result, they determined that the Collins College of Hospitality Management would be a mutually beneficial relationship. With the growing craft beer industry, they provided internships for students interested in learning the food or beverage side of Innovation Brew Works.

Interviewees that had worked at Innovation Brew Works as students consistently noted that they felt better prepared for employment. Additionally, multiple students noted that they appreciated the opportunity to use what they learned in the classroom in a real-life setting. These comments are consistent with the published benefits of experiential learning. Additionally, these opportunities are consistent with Cal Poly Pomona's approach to hands-on learning.

Interdisciplinary learning. Similar to experiential learning, interdisciplinary learning was a term and benefit noted by current and past students who have worked at Innovation Brew Works. As stated in the literature, interdisciplinary learning makes sense as "Real world problem solving often occurs in groups, combining different strengths and different backgrounds" (Mueller, Juris, Willermet, Drake, Upadhaya & Chhetri, 2014, p. 121). Consistent with the literature, interviewees noted the value in working with other students from different educational backgrounds as it provided

additional perspectives in problem solving and in general operations. The value of these interdisciplinary experiences, however, are difficult to identify or realize prior to experiencing them. Having personally worked in higher education administration for over a decade, the exposure to working in an interdisciplinary team would have been an invaluable experience. When I think back to my schooling, the majority of real-world experiences I had were with students in my same major. I did not have the benefits of working with students from different disciplines nor the experience of providing services, as a group, for the community. In many ways, I was ill-prepared for employment where functioning in a team environment with personalities and perspectives that are largely different than your own is paramount.

Discussion of Kolb's Theory on Experiential Learning

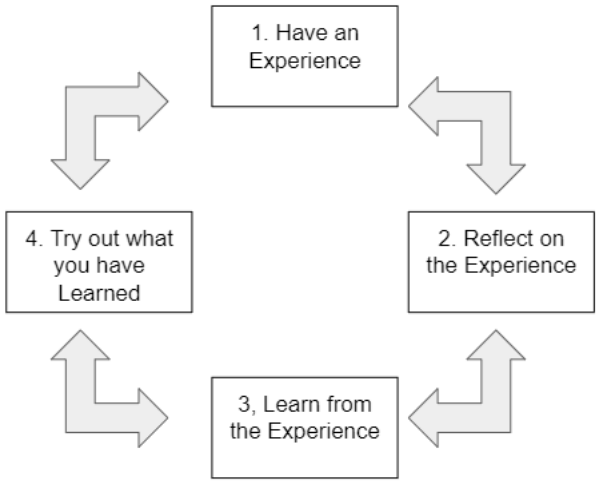
Given that Kolb's Theory on Experiential Learning served as the theoretical framework for this study, it is important to provide a discussion on how this theory impacted my dissertation study, both in the actual research environment and in my personal dissertation journey. In the study, Kolb's theory helped to explain the experiential learning opportunities available to Cal Poly students and also helped in understanding the decision making process to create Innovation Brew Works. Additionally, Kolb's theory helped provide a framework and approach to writing this dissertation, based on Kolb's well-defined learning cycle.

According to Kolb (1984), "Learning is defined as the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience. Grasping experience refers to the process of taking in information, and transforming experience is how individuals

interpret and act on that information" (p. 49). According to Kolb (1984), experiential learning highlights the relationship between education, work, and personal development. Moreover, Kolb (2015) suggests that experiential learning "pictures the workplace as a learning environment that can enhance and supplement formal education and can foster personal development through meaningful work and career-development opportunities" (p. 4). In simplest form, Kolb (1984) defines experiential learning as the "process whereby knowledge is created through the transformation of experience" (p. 49). Please see Figure 2 for a visual representation of Kolb's Theory on Experiential Learning.

Figure 2

Kolb's Theory on Experiential Learning



Initially, this theoretical framework fit well for this dissertation study because of the Cal Poly Pomona and Innovation Brew Works learn-by-doing philosophy. Innovation Brew Works was created to provide hands-on experiences for brewing science and Collins College of Hospitality Management students. There is a clear parallel between Kolb's Theory on Experiential Learning and the hands-on approach at Innovation Brew Works. At its core, Innovation Brew Works provides students with an avenue to

supplement formal education with practical and career-focused opportunities. What I did not realize when I began this dissertation is that Cal Poly Pomona's approach to education globally was in-line with Kolb's Theory on Experiential Learning. In everything that Cal Poly Pomona does, from agriculture, architecture, hospitality management, or urban and regional planning, they advocate for a hands-on approach, consistent with Kolb's Theory on Experiential Learning.

Another significant area of focus that emerged during this research study was related to the decision making process to create Innovation Brew Works. Here, I would argue that Kolb's Theory on Experiential Learning can be used not only as a framework for learning, but also as a framework for decision making. At the very least, the theory can be a useful component in decision making. In Kolb's theory, there are four stages in the learning cycle. These include: concreate experience; reflective observation; abstract conceptualization; and active experimentation. The concrete experience stage relates to the actual experience. In the reflective observation stage, one reviews or reflects on the experience. In the abstract conceptualization stage, one draws conclusions from the learning experience and reflections. In the final stage, the active experimentation stage, one tries out what they have learned. When I think about the decision making process involved in Innovation Brew Works, this learning model seems to fit well with decision making. If we learn through experience, we also make decisions through our experiences and what we have learned from them.

Applying Kolb's theory as part of the decision making process is relatively straightforward. Cal Poly Pomona had concrete experiences (stage 1) with serving alcohol on campus. They had three examples of serving alcohol on campus: Blazing

Saddles, The Restaurant on Kellogg Ranch; and Round Table Pizza. In the reflective observation phase (stage 2), they were able to look at each of these ventures and reflect on what worked and what did not work. Blazing Saddles did not work because of its bar-like atmosphere, which seemed to reinforce unhealthy drinking habits. In the Restaurant on Kellogg Ranch and Round Table Pizza, Cal Poly Pomona had examples of what did work. With a focus on food, education and careful attention to levels of consumption, Cal Poly Pomona had a roadmap for success. In the abstract conceptualization phase (stage 3), Cal Poly Pomona concluded that a brewery and brewpub could work on campus given the success of the previously mentioned ventures, especially if they were able to mirror a restaurant with an education focus. In the active experimentation stage (stage 4), Cal Poly Pomona began to plan and establish the brewery and brewpub based on what they had learned. In a very basic sense, these were the steps that Cal Poly Pomona took to reach the decision to create Innovation Brew Works. The process was essentially Kolb's learning cycle, but it became a process to make decisions. Using your past, learned experiences to inform decision making is likely not a novel concept, but it does provide a helpful framework for decision making based on experience and reflection.

Kolb's Theory of Experiential Learning also helped with my approach to writing this dissertation. Specifically, using the pilot study at Case Western Reserve University as the start of the learning cycle. Here, the pilot study served as the concrete experience (stage 1). Next, I went through a reflective observation phase (stage 2), where I thought critically about my experience at Case Western Reserve University. What worked in my interview protocol? What did not work in my interview protocol? Even more broadly, was the research question worth exploring? From there, I entered the abstract

conceptualization phase (stage 3) where I made conclusions about adjustments I needed to make to my research question, sub-questions and to my interview protocol. Then, in the active experimentation phase (stage 4), I had the opportunity to take what I had learned from my pilot study and apply it to my case study at Cal Poly Pomona.

Looking back, there are multiple levels where Kolb's Theory on Experiential Learning helped to better understand not only the experiential learning opportunities at Innovation Brew Works for students, but also the decision making process involved in Innovation Brew Works' creation. Upon further reflection, I also see parallels between Kolb's Theory on Experiential Learning and the learning cycle I moved through during this dissertation. In this sense, Kolb's theory has provided much of the foundation for this dissertation study.

Discussion of Implications

Higher Education administrators and students could both benefit from the lessons learned in this dissertation study. As such, there are several implications for higher education and students to consider. These implications include the consideration of an on-campus brewery and brewpub, expanding experiential learning opportunities on campuses, using Kolb's theory on experiential learning to inform decision making, and reframing the conversation surrounding alcohol use on college campuses.

With the facilities arms race occurring across college campuses, this dissertation highlights a novel amenity. Given the success of Innovation Brew Works and other institutions that have since followed suit, this could present a trend on college campuses moving forward. Given the shrinking support from state entities, an on-campus brewery or brewpub could provide an additional and valuable revenue stream that universities

should consider. However, universities would be wise to consider the impact a brewery and brewpub would have on their students and if it would fit responsibly within their campus culture.

Additionally, higher education administrators may consider expanding experiential learning opportunities as part of their offered curriculums. As this dissertation highlights, experiential learning opportunities are a benefit to students, higher education institutions, and the community. If institutions of higher education desire to be employment focused, expanding experiential learning opportunities should be part of their strategic planning. And as this dissertation highlights, expanding experiential learning opportunities does not need to follow the same formula. Universities can consider non-traditional options to attract and provide students with unique opportunities.

In addition to highlighting the value of Kolb's learning cycle, this dissertation illustrates the value of utilizing the learning cycle in decision making. While the use of Kolb's Theory on Experiential Learning is well established in the literature, this research expands on the scope and breadth of Kolb's theory to demonstrate effective decision making. Universities should look to this learning cycle process to help make better informed decisions. Given the current financial climate in higher education, an effective tool for decision making may help to avoid the mistakes of yesterday.

Finally, this dissertation study has the potential to change the approach to alcohol availability on college campuses. Instead of making the topic of alcohol consumption on college campuses somewhat taboo, there could be a shift to normalize consumption. As discussed in this dissertation, the country's approach to alcohol consumption seems sensationalized compared to other countries. This dissertation could change the

messaging surrounding alcohol consumption. Instead of alcohol consumption being viewed as almost antiestablishment, it becomes mainstream.

Contributions to the Literature

There are several noticeable contributions to the literature. First, this dissertation provides research on a noticeable gap in the literature: student-run or largely student-run enterprises. As mentioned earlier, I was surprised at the lack of literature available on student run or largely student-run enterprises. Given that so many universities use the talents of their students, I anticipated an abundance of research on these enterprises. Everyone I talked to about my dissertation prior to starting seemed to have a different student-run enterprise to mention, but I found it very difficult to find much information on them, especially from a research perspective.

Another contribution to the literature is in the area of decision making in higher education. Again, there seemed to be a lot of literature on decision making, but very little on the decision making process in higher education. This dissertation study provides insight into the factors affecting and the process for making decisions on college campuses. Additionally, this dissertation provides a noteworthy case for decision making when there are ethical considerations involved.

A third contribution to the literature is in the general field of experiential learning. While there is a large body of literature available on the benefits of experiential learning and the potential pitfalls, this dissertation study provided insight into a novel avenue for providing experiential learning opportunities.

Lastly, this dissertation adds to the specific literature on Kolb's Theory on Experiential Learning. It provides a comprehensive illustration of the four learning cycles

at multiple levels. In addition, as I argue, it suggests that Kolb's Theory on Experiential Learning could also be beneficial when considering the decision making process. Here, this case study highlights how Kolb's theory, which focuses on experience, reflection, and acting based on learning, can be a powerful tool for making or aiding in the decision making process.

Recommendations for Future Research

In my experience in reviewing the literature, there were noticeable gaps in a number of different areas. The most noticeable identified gap in literature was in the area of student-run enterprises on campus. Given the number and long history of student-run or largely student-run enterprises on campus, there was little available in peer-reviewed literature on them. Basic research on what types of student-run enterprises exist, how they have operated, benefits to students and the institutions, and how these enterprises fit within higher education, are all reasonable areas to research. Given that breweries and brewpubs on campus are in their infancy, there is a significant gap in the literature on these on-campus amenities/educational facilities. Therefore, research on other on-campus breweries and brewpubs would be helpful to provide more generalizable results across campuses. While research in the area of experiential learning is abundant, specific research on experiential learning opportunities related to on-campus brewery and brewpubs is lacking. While this research provides insight into the available experiential learning opportunities, future research focusing on the student perspective would add to the findings of this study. Research in work readiness and the employability of those that gain experience in a brewery or brewpub setting would be helpful. Specifically, research from the perspective of the employer on skills students have developed or lack, would be

particularly interesting. Again, while there is employer-related experiential learning research, expanded research in this area to cover additional domains (breweries and brewpubs, for instance), would be reasonable.

Limitations

Given that this dissertation is a single case, qualitative study, it is not very generalizable to other institutions. The results of this dissertation may provide insight to how a brewery or brewpub could be created or received on another college campus. However, any assumption that this dissertation would provide anything more than insight would be irresponsible. This study could, however, be replicated at other sites.

Another limitation to this dissertation study was not having access to Innovation Brew Works specific financial data. While I was able to review Foundation Financial Reports, none of the reports were specific enough to highlight Innovation Brew Works itself. Instead, I was able to see a higher organizational budgetary level, Dining Services, which included Innovation Brew Works.

A third limitation is that I was not able to utilize employers as a data point for interviews. I likely could have talked to employers of past students, but they would not have been remotely randomized. Instead, it would have likely been employers that have had significant experience with Cal Poly Pomona students. This would not have provided a representative sample of employer experiences.

A fourth limitation relates to the composition of the interview pool. While I was able to capture the student perspective through past students, I was unable to use specific data for current students. I had two interviews that were conducted at Cal Poly Pomona

with current students that were not audible upon attempts to transcribe. The content of the interviews, however, were consistent with past student perspectives.

Lastly, there are certain limitations inherent in qualitative methodology. Specifically, there may be concerns of the validity of data or inherent biases in the data collection and data analysis stage.

Conclusions and Lessons Learned

To provide an adequate conclusion, I think it is important to return to my initial research question, What can be learned from the country's first university owned brewery and brewpub, and the following research sub-questions:

- Given the documented negative consequences of drinking alcohol on college campuses, how was the decision reached to create an on-campus brewery and brewpub?
- What role, if any, did ethical considerations have in the discussion to create an on-campus brewery and brewpub?
- How has the brewery and brewpub contributed to the on-campus environment?
- How has the brewery and brewpub contributed to the academic environment and employability of students?

In using the above overarching research question and sub-questions to guide this conclusion, there are a number of relevant lessons learned from Cal Poly Pomona's creation of the first university owned brewery and brewpub.

Environment & Mission: A Path Toward Creating Innovation Brew Works with a Focus on Learn by Doing. This case study highlights the factors that helped nurture the concept of an on-campus brewery from concept to creation. Overall,

Innovation Brew Works seems to be a positive addition to the campus environment. While there have been some challenges in establishing its identity, Innovation Brew Works seems to have been successful in its academic and social pursuits. From the interviews, document analysis, and observation, the components that helped moved this project forward were Cal Poly Pomona's campus environment as well as the Cal Poly Pomona learn-by-doing philosophy. The environment, including past precedent of serving alcohol on campus, their understanding of the student population, their understanding of the campus culture, and the leadership, created the perfect climate for entertaining this novel concept. The turning point in moving this concept forward and having it become part of the fabric of the institution was the decision to make the brewery an educational brewery. As has been described throughout this dissertation, Cal Poly Pomona's decision to leverage their university's mission and philosophy, which centered on learn-by-doing, seemed to be the defining moment of making Innovation Brew Works a reality. Without the educational component, the concept of an on-campus brewery simply as an amenity, seemed much more challenging to justify. By pivoting to make the brewery educationally focused, Cal Poly Pomona was able to capitalize on providing something students wanted, their business community needed, and they were able to justify by providing seamlessly integrated academic programming. All of this demonstrates the importance of environment and mission in decision making and implementation. These environmental factors and mission-focused approach also help to answer the sub-questions of how the decision was reached to create an on-campus brewery and brewpub, and how the brewery and brewpub have contributed to the mission.

Administrative Control & Oversight: Ethical Considerations and Moving Forward. This case study also highlights the importance of administrative control and oversight in decision making and implementation of novel or controversial projects. I am not entirely convinced that an on-campus brewery and brewpub is the right project for every college campus. However, it works at Cal Poly Pomona. It works because the administrators involved had experience, understood the campus well, and were intimately involved in shaping the final product. It also works because administrators were able to get buy-in across the campus community for creating an on-campus brewery and brewpub. As discussed earlier, the vote to create Innovation Brew Works was unanimous. The campus community had complete trust and faith in leadership on this decision. That comes with experience and a history of providing reasonable oversight for projects. However, because higher education administrators were so heavily involved, Innovation Brew Works, based on my research observations, seemed unique compared to other microbreweries across the country. As discussed earlier, this brewery lacks a bar. Additionally, a majority of the promotional materials centered on the academic component of the brewery. All that said, Innovation Brew Works is not a college cafeteria or just another college restaurant either. Instead, it is as Cal Poly Pomona administrators had hoped, a casual and safe spot for students and community to intermix over dinner and/or drinks. This theme of administrative oversight and control helps to answer the sub-question of what ethical considerations administrators needed to examine to move this project forward. Without close involvement and a proven track record of acting in the universities best interest, this project may have lacked the institutional buy-in to move it forward.

Establishing Innovation Brew Works' Identity and how it has Impacted the Campus Environment. Another area where we learned from this case study relates to developing Innovation Brew Works' identity. I have looked at Innovation Brew Works as a business within a business. Because of that, there seemed to be a struggle for Innovation Brew Works to develop its identity. Past research on student-run or largely student-run enterprises described the difficulty in creating and maintaining a consistent product. For a brewery, your identity and brand are largely influenced by your ability to produce a consistent product. This certainly seems to be a challenge for Innovation Brew Works. Additionally, this seems to be a singular example of a larger problem of being able to treat Innovation Brew Works as a business. All of this, however, comes back to my initial assertion of looking at this as a business within a business. Instead, maybe I should be looking at this an educational program within an institution of higher education. Here, the focus aligns better with providing educational opportunities and growth in educational opportunities, not necessarily growth in sales. This discussion of Innovation Brew Works' identity helps to answer the sub-question of how Innovation Brew Works has contributed to the on-campus environment. As described throughout this dissertation, Innovation Brew Works has been impactful as both an academic facility and as a student amenity. This ability to straddle both the academic and social arenas has elevated Innovation Brew Works' visibility on campus.

In summary, we have learned about the decision making process in higher education and the factors influencing the decision making process. Additionally, we have learned about a novel approach to providing experiential learning opportunities for

students that, for Cal Poly Pomona, is also mission-driven. The success for Innovation Brew Works, however, revolves around its ability to support the university's academic mission while providing an amenity for students and the Cal Poly Pomona community. Based on the results of this dissertation and the additional on-campus breweries and brewpubs that have been established, it may be time for other universities to strongly consider following this growing trend.

References

Abar, C., Mallett, K., Turrisi, R., & Abar, B. (2014). First- and second-hand consequences of alcohol in college: Differential associations with later alcohol use. *Journal of Substance Abuse,* 21(1), 107-111.

About Cal Poly Pomona. (2019). Retrieved May 6, 2019, from https://www.cpp.edu/-aboutcpp/index.shtmlhttps://www.cpp.edu/-aboutcpp/index.shtml.

About Innovation Village. (2019). Retrieved April 8, 2019, from http://www.innovationvillage.org/general-information.html.

Acitelli, T. (2015). The origins of America's first university degree in brewing. Retrieved April 18, 2019, from http://allaboutbeer.com/the-origins-of-americas-first-university-degree-in-brewing.

Adya, M., Temple, B., Hepburn, D. (2015). Distant yet near: Promoting interdisciplinary learning in significantly diverse teams through socially responsible projects. *Decision Sciences Journal of Innovative Education,* 13(2), 121-149.

Alpert, F., Heaney, J., & Kuhn, K. (2009). Internships in marketing: Goals, structures and assessment-student, company and academic perspectives. *Australiasian Marketing Journal,* 17(1), 36-45.

Andrews, J., & Higson, H. (2008). Graduate employability, 'soft skills' versus 'hard' business knowledge: A European study. *Higher Education in Europe,* 33(4), 411-422.

Apoorva, Pillai, A., Nayanar, A., Chopra, A., Suresh, A., Balika, Shaffi, C., Harikrishnan, K., Kundapur, R., & Ravi, K. (2014). Risk factors and consequences of alcohol

consumption among college students. *Nitte University Journal of Health Science,* 4(2), 102-104.

Avery, J., & Marra, J. (1992). Student-run advertising agencies: A showcase for student work. *Annual Meeting of the Association for Education in Journalism and Mass Communication,* 1-37.

Bailey, J. (2008). First steps in qualitative data analysis: Transcribing. *Family Practice,* 25(2), 127-131.

Barnwell, S. (2016). *Relationships between internships and employment competencies of degreed professionals who completed a college internship* (unpublished doctoral dissertation). Walden University.

Beer Schools. (2019). Retrieved April 18, 2019, from https://www.craftbeer.com/beer/beer-schools.

Bennett, S. (2015). 5 LA breweries to watch in 2016. Retrieved from https://www.laweekly.com/restaurants/5-la-breweries-to-watch-in-2016-6425820.

Bernard, H. R. (2006). *Research methods in anthropology: Qualitative and quantitative approaches.* AltaMira Press.

Berry, P. (2009). Redesign of the undergraduate business curriculum: The way forward, a paradigm shift. *American Journal of Business Education,* 2(8), 55-64.

Board of Directors. (2013). 'Item III.C. CPP Beer Brewing Program Microbrewery Model at CTTi'. *In Minutes of Cal Poly Pomona Foundation meeting 13 November 2013.* Retrieved from https://foundation.cpp.edu/content/d/Meeting%20Packets/BM357.pdf.

Bogdan, R., & Taylor, S.J. (1975). *Introduction to qualitative research methods.* John Wiley.

Bornstein, R. (2009). Ethics and leadership: A former president reflects on the pivotal role of character in the college presidency. *Journal of College and Character,* 10(3), p. 1-7.

Bowen, G. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal,* 9(2), 27-40.

Bromley, D. (1986). *The case study method in psychology and related disciplines*. John Wiley.

Brewers Association. (2018). Craft brewer defined. *Brewers Association.* Retrieved from https://www.brewersassociation.org/statistics/craft-brewer-defined/.

Brewers Association. (2020). National Beer Sales & Production Data. *Brewers Association.* Retrieved from https://www.brewersassociation.org/statistics-and-data/national-beer-stats/.

Brewers Association. (2018). Number of breweries. *Brewers Association.* Retrieved from https://www.brewersassociation.org/statistics/number-of-breweries/.

Cal Poly Pomona. (n.d.). 2019 Annual Security Report. Retrieved April 22, 2020 from https://www.cpp.edu/pdfs/annual_security_report.pdf.

Cal Poly Pomona. (n.d.). Cal Poly Pomona overview. *Cal Poly Pomona.* Retrieved from https://www.cpp.edu/~aboutcpp/calpolypomona-overview/index.shtml.

Callanan, G., & Benzing, C. (2004). Assessing the role of internships in the career-oriented employment of graduating college students. *Education + Training,* 46(2), 82-89.

Calderon, V. & Sidhu, P. (2013). American say graduates' jobs status key to college choice. *Gallup.* Retrieved from http://www.gallup.com/poll/163268/americans-say-graduates-jobs-status-key-college-choice.aspx.

Chen, S., Hsu, I., & Wu, C. (2009). Evaluation of undergraduate curriculum reform for interdisciplinary learning. *Teaching in Higher Education,* 14(2), 161-173.

Cilluffo, A. (2017). *5 facts about student loans.* Retrieved from http://www.pewresearch.org/fact-tank/2017/08/24/5-facts-about-student-loans/.

Coco, M. (2000). Internships: a try before you buy arrangement. *SAM Advanced Management Journal*, *65*(2), 41–47.

Cook, S., Parker, R., & Pettijohn, C. (2004). The perceptions of interns: A longitudinal case study. *Journal of Education for Business,* 79(3), 179-185.

Cranmer, S. (2006). Enhancing graduate employability: Best intentions and mixed outcomes. *Studies in Higher Education,* 31(2), 169-184.

Creswell, J.W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). SAGE.

Creswell, J.W. & Miller, D. (2000). Determining validity in qualitative inquiry. *Theory into Practice,* 39(3), 124-130.

Cummings, L. (2013). Bridging the gap: Internships can benefit students and employers. *Public Relations Tactics,* 20(1), 18.

D'Abate, C. (2010). Developmental Interactions for business students: Do they make a difference? *Journal of Leadership & Organizational Studies,* 17(2), 143-155.

Degravel, D. (2011). Internships and small business. *Journal of Management Policy and Practice,* 12(2), 27-43.

Denzin, N. (1989). *The research act (3rd ed.).* Prentice Hall.

Divine, R., Linrud, J., Miller, R., & Wilson, J. (2015). Required internship programs in marketing: Benefits, challenges and determinants of fit, *Marketing Education Review*, 17(2), 45-52.

Dyer, F.R., & Foreman, E.H. (1991). An analytic approach to marketing decisions. Prentice-Hall.

Eagan, K., Stolzenberg, E., Bates, A., Aragon, M., Suchard, M., & Rios-Aguilar, C. (2015). *The American freshman: National norms fall 2015.* Retrieved from https://www.heri.ucla.edu/monographs/TheAmericanFreshman2015.pdf.

Evans, L. (2013). University-backed businesses that put students in the driver's seat. Retrieved from https://www.entrepreneur.com/article/229079.

Eyler, J. (2009). The power of experiential education. *Liberal Education*, *95*(4), 24- 31. Retrieved from http://www.aacu.org/liberaleducation.

Farrell, E. (2007). Reports says freshmen put career prep first. *Chronical of Higher Education*, 53(18).

Fischer, K. (2013, March 4). The employment mismatch. *The Chronicle of Higher Education.* Retrieved from http://www.chronicle.com/article/The-Employment-Mismatch/137625.

Focus and History. (n.d.). Retrieved April 18, 2019, from https://www.siebelinstitute.com/about-us/focus-and-history.

Fuertes, J., & Hoffman, A. (2016). Alcohol consumption and abuse among college students: Alarming rates among the best and the brightest. *College Student Journal*, 50(2), 236-240.

Frawley, J., & Litchfield, A. (2009). Engaging students and academics in work-ready learning contextualized for each profession in the curriculum. *Proceedings of the 32nd HERDSA Annual Conference,* 141-153.

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

Gault, J., Redington, J., & Schlager, T. (2016). Undergraduate business internships and career success: Are they related? *Journal of Marketing Education,* 22(1), 45-53.

Glaser, B. & Strauss, A. (1967). *The discovery of grounded theory: Strategies for qualitative research.* Aldine.

Glassman, T., Kruger, S., Paprzycki, P., Blavos, A., Hutzelman, E., & Diehr, A. (2016). Abstinence, social norms, and drink responsibly messaging: A comparison study. *Journal of Alcohol and Drug Education,* 60(2), 72-90.

Green, B., Graybeal, P., & Madison, R. (2011). An exploratory study of the effect of professional internships on students' perceptions of the importance of employment traits. *Journal of Education for Business,* 86, 100-110.

Gruenewald, P., & Millar, A. (1993). Alcohol availability and the ecology of drinking behavior. *Alcohol Health Research World, 17(1), 39.*

Guba, E.G. (1978). *Toward a methodology of naturalistic inquiry in educational evaluation.* Monograph 8. UCLA Center for the Study of Evaluation.

Guest, G., Bunce, A., & Johnson, L. (2016). How many interviews are enough? An experiment with data saturation and variability, *Field Methods,* 18(1), 59-82.

Haley, T. (2008). The lab of the future: Building facilities that attract premier faculty and students. *Facilities Manager,* 30-31.

Hall, M., Stiles, G., Kuzma, J., & Elliott, K. (1995). A comparison of student and employer expectations with regard to business internships. *Marketing Education Review*, 5(3), 100-110.

Harris, D. Learning through experience: Examining the influence of baccalaureate internships on college graduate employment outcome adequacy (unpublished doctoral dissertation). Retrieved from https://idea.library.drexel.edu/islandora/object/idea%3A6717/datastream/OBJ/view.

Helyer, R., & Lee, D. (2014). The role of work experience in the future employability of higher education graduates. *Higher Education Quarterly,* 68, 348-372.

Hergert, M. (2009). Student perceptions of the value of internships in business education. *American Journal of Business Education*, 2(8), 9-14.

Hingson, R.W., Heeren, T., Winter, M., & Wechsler, H. (2005). Magnitude of alcohol-related mortality and morbidity among U.S. college students 18-24: changes from 1998 to 2001. Annual Review of Public Health, 26, 259-279.

Hingson, R.W., Zha, W., & Weitzman, E.R. (2009). Magnitude and trends in alcohol-related mortality and morbidity among U.S. college students ages 18-24, 1998-2005. *Journal of Studies on Alcohol and Drugs,* 16, 12-20.

Hite, R., & Bellizzi, J. (1986). Student expectations regarding collegiate internship programs in marketing. *Journal of Marketing Education*, 8(3), 41-49.

Hobson, W. & Rich, S. (2015). Colleges spend fortunes on lavish athletic facilities. Retrieved from http://www.chicagotribune.com/sports/college/ct-athletic-facilities-expenses-20151222-story.html.

Hooker, P., Deutschman, W., & Avery, B. (2014). The biology and chemistry of brewing: An interdisciplinary course. *Journal of Chemical Education,* 91(3), 336-339.

Hoxby, C. (2009). The changing selectivity of American colleges. *Journal of Economic Perspectives,* 23(4), 95-118.

Itin, C. (1999). Reasserting the philosophy of experiential education as a vehicle for change in the 21st century. *The Journal of Experiential Education,* 22(2), 91-98.

Ivanitskaya, L., Clark, D., Montgomery, G., & Primeau, R. (2011). Interdisciplinary Learning: Process and Outcomes, *27*(2), 95–111.

Jacob, B., McCall, B., & Stange, K. (2011). The consumption value of postsecondary education. Retrieved from http://edpolicy.umich.edu/files/wp-jacob-mccall-stange-consumption-value-of-postsecondary-education-2011.pdf.

Jacob, B., McCall, B., & Stange, K. (2013). College as country club: Do colleges cater to students' preferences for consumption? NBER Working Paper Series, 1-87.

Jaschik, S. & Lederman, D. (2017). 2017 Survey of college and university admissions directors. *Insight Higher Education,* 1-49.

Kitchener, K. (1985). Ethical principles and ethical decisions in student affairs. *New Directions for Student Affairs,* 30, 17-29.

Knouse, S., & Fontenot, G. (2008). Benefits of the business college internship: a research review. *Journal of Employment Counseling, 45,* 61–66.

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

Kolb, D., Boyatzis, R., & Mainemelis, C. (1999). Experiential learning theory: Previous research and new directions. Retrieved from

https://www.d.umn.edu/~kgilbert/educ5165-731/Readings/experiential-learning-theory.pdf.

Kuh, G. (2011). The other curriculum. *Journal of Higher Education,* 66(2), 123-155.

Kuo, M., Wechsler, H., Greenberg, P., & Lee, H. (2003). The marketing of alcohol to college students. *American Journal of Preventive Medicine,* 25(3), 204-211.

Lapadat, J.C. & Lindsay, A.C. (1999). Transcription in research and practice: From standardization of technique to interpretive positions. *Qualitative Inquiry,* 5(1), 64-86.

Lattuca, L., Knight, D., Seifert, T., Reason, R., & Liu, Q. (2017). Examining the impact of interdisciplinary programs on student learning. *Innovative Higher Education,* 42, 337-353.

Leavens, E., Leffingwell, T., Miller, M., Brett, E., & Lombardi, N. (2016). Subjective evaluations of alcohol-related consequences among college students: Experience with consequences matters. *Journal of American College Health,* 65(4), 243-249.

Lord, K., Sumrall, D., & Sambandam, R. (2011). Satisfaction determinants in business internships. *Interdisciplinary Journal of Contemporary Research in Business*, 2(10), 11-22.

Marshall, C., & Rossman, G. (1989). Designing qualitative research. Sage.

Mason, M. (2010). Sample size and saturation in PhD studies using qualitative interviews. *Forum: Qualitative social research,* 11(3), 1-19.

Maykut, P., & Morehouse, R. (1994). *Beginning qualitative research.* The Falmer Press.

Merseth, K. (1994). Cases, case methods, and the professional development of educators. *ERIC Digest,* Retrieved from https://files.eric.ed.gov/fulltext/ED401272.pdf.

Merriam, S. (1998). Case studies as qualitative research, *Qualitative Research and Case Study Applications in Education,* 26-44.

Mission and Values. (2020). Retrieved April 8, 2020, from https://www.cpp.edu/aboutcpp/calpolypomona-overview/mission-and-values.shtml.

Mitchell, M., Leachman, M., & Masterson, K. (2017). *A lost decade in higher education funding,* Retrieved from https://www.cbpp.org/research/state-budget-and-tax/a-lost-decade-in-higher-education-funding.

Moghaddam, J. (2014). Impacts of internships on students' personal/business values and the role of their personality traits. *Journal of Global Business Management,* 10(1), 52-60.

Mueller, A., Juris, S., Willermet, C., Drake, E., Upadhaya, S., & Chhetri, P. (2014). Assessing interdisciplinary learning and student activism in a water issues course. *Journal of the Scholarship of Teaching and Learning,* 14(2), 111-132.

Narayanan, V., Olk, P., & Fukami, C. (2010). Determinants of internship effectiveness: An exploratory model. *Academy of Management Learning & Education,* 8(1), 61-80.

Nasiripour, S., & Forster, N. (2016). *3 charts that show just how dire the student debt crisis has become* retrieved from https://www.huffingtonpost.com/entry/3-charts-student-debt-crisis_us_56b0e9d0e4b0a1b96203d369.

National Association of Colleges and Employers. (2017). *Jobs Outlook 2018.* Retrieved from http://careerservices.wayne.edu/pdfs/2018-nace-job-outlook-survey.pdf

National Center for Education Statistics. (2015). *Fast Facts*. Retrieved from https://nces.ed.gov/fastfacts/display.asp?id=76.

National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. (1978). *The Belmont report: Ethical principles and guidelines for the protection of human subjects of research*. The Commission.

NIAAA. (2018). College drinking. Retrieved from https://pubs.niaaa.nih.gov/publications/CollegeFactSheet/CollegeFactSheet.pdf.

Nielson, R., Sorensen, J., Simonsen, M., Madsen, H., Muff, M., & Sogaard, R. (2016). Brewing as a compreshensive learning platform in chemical engineering, Journal of Chemical Engineering, 93(9), 1549-1555.

Nietzel, M. (2018). Sobering thoughts about alcohol sales at college stadiums. Retrieved from https://www.forbes.com/sites/michaeltnietzel/2018/12/01/second-sobering-thoughts-about-alcohol-sales-at-college-stadiums/1.

Pacific Institute for Research and Evaluation. (2011). Environmental strategies to prevent alcohol problems on college campuses. Retrieved from http://www.pire.org/documents/UDETC/overview-framework/EnvStratCollege.pdf.

Pasewark, W.R., Strawser, J., & Wilkerson, J. Jr. (1989). An empirical examination of the effect of previous internship on interviewing success. *Journal of Accounting Education*, 7, 25-39.

Paulins, V. A. (2008). Characteristics of retailing internships contributing to students' reported satisfaction with career development. *Journal of Fashion Marketing and Management,* 12(1), 105-118.

Patton, M. (1999). Enhancing the quality and credibility of qualitative analysis. *Health Services Research,* 34(5), 1189-1208.

Pelter, M. (2006). Brewing science: Using beer and brewing process to stimulate interest in science the science laboratory, *Journal of College Science Teaching*, 35, 48-52.

Peter D. Hart Research Associates. (2006). *How should colleges prepare students to succeed in today's global economy?* Retrieved from https://www.aacu.org/sites/default/files/files/LEAP/2007_full_report_leap.pdf.

Peter D. Hart Research Associates. (2010). *Raising the bar: Employers' views on college learning in the wake of the economic downturn.* Retrieved from http://www.aacu.org/leap/documents/2009_EmployerSurvey.pdf.

Price, I., Matzdorf, F., Smith, L., & Agahi, H. (2003). The impact of facilities on student choice of university. *Facilities,* 21(10), 212-222.

Quitadamo, I., & Campanella, R. (2005). Cougars, curriculum and community. *Science Teacher,* 72(4), 28-31.

Rae, D. (2007). Connecting enterprise and graduate employability. *Education + Training,* 49(8/9), 605-619.

Reynolds, G. (2007). The impact of facilities on recruitment and retention of students. *New Directions for Institutional Research,* 135, 63-80.

Richards, E. (1984). Undergraduate preparation and early career Outcomes: A study of recent college graduates. *Journal of Vocational Behavior,* 24, 279-304.

Robinson, J. (2017). Bigger's better? In higher ed's amenities arms race, bigger's just bigger! Retrieved from https://www,jamesgmartin.center/2017/01/biggers-better-higher-eds-amenities-arms-race-biggers-just-bigger.

Rothman, M., & Lampe, M. (2009). Business school internships: Sources and resources. *Proceedings of the ASBBS Annual Conference,* 16(1), 1-8.

Ruffalo Noel Levitz. (2018). 2018 cost of recruiting an undergraduate student report. Retrieved from http://learn.ruffalonl.com/rs/395-EOG-977/images/RNL_2018_Cost_of_Recruiting_Report_EM-005.pdf.

Ryan, G., & Bernard, H. (2003). Techniques to identify themes. *Field Methods,* 15(1), 85-109.

SAMHSA. (2014). Bing alcohol use in the past month among persons aged 18 to 22, by college enrollment status and demographic characteristics. Retrieved from http://www.samhsa.gov/data/sites/default/files/NSDUHDetTabs2014/NSDUH-DetTabs2014/NSDUH-DetTabs2014.htm#tab6-88b.

Schulenberg, J., Johnston, L., O'Malley, P., Bachman, J., Miech, R., & Patrick, M. (2017). Monitoring the Future. Retrieved from http://www.monitoringthefuture.org/pubs/monographs/mtf-vol2_2016.pdf.

Sheehan, B., Lau-Barraco, C., & Linden, A. (2013). An examination of risk drinking behaviors and motivations for alcohol use in a college sample. *Journal of American College Health,* 61(8), 444-452.

Sheppard, M., Usdan, S., Higginbotham, J., & Cremeens-Matthews. (2016). Attitudes and descriptive norms of alcohol-related problems as predictors of alcohol use among college students. *Journal of Alcohol and Drug Education,* 60(1), 30-48.

Short, K. (2013). The impact of experiential learning: Assessing the outcomes of internship experiences for students entering the construction industry (doctoral dissertation). Retrieved from

https://vtechworks.lib.vt.edu/bitstream/handle/10919/63890/Short_KM_D_2013.pdf.

Smith, M.K, (2010). David A. Kolb on experiential learning. *Infed.* Retrieved from http://infed.org/mobi/david-a-kolb-on-experiential-learning.

Stake, R. (2010). *Qualitative Research,* New York, NY: The Guilford Press.

Sykes, C. (2016). Are baccalaureate graduates prepared for work, internship, or no internship program? A qualitative exploratory inquiry (doctoral dissertation). Retrieved from https://pqdtopen.proquest.com/doc/1800791861.html?FMT=AI.

Templeton, W., Updyke, K., & Bennett, R. (2012). Internships and the assessment of student learning. *Business Education & Accreditation,* 4(2), 27-38.

The Kellogg Connection. (2020). Retrieved April 13, 2020 from https://www.cpp.edu/aboutcpp/heritage/kellogg-connection.shtml.

Trede, F., & McEwen. (2015). Early workplace learning experiences: What are the pedagogical possibilities beyond retention and employability? *Higher Education,* 69(1), 19-32.

Trent, M. & Pollard, D. (2019). Implementing ethical decision-making: Strategies for today's community college presidents. *New Directions for Community Colleges,* 185, 65-74.

U.S. Department of Education (n.d.). Campus safety and security. Retrieved April 17, 2020 from https://ope.ed.gov/campussafety/#/.

Voas, R., Johnson, M., Turrisi, R., Taylor, D., Honts, C., & Nelson. (2008). Bringing alcohol on campus to raise money: Impact on student drinking and drinking problems. *Addiction,* 103(6), 940-950.

Watson, B. & Herz, J. (n.d.). National beer sales and production data. *Brewers Association.* Retrieved from https://www.brewersassociation.org/statistics/national-beer-sales-production-data/.

Watson, B. (n.d.). *Economic impact*. Brewers Association. Retrieved from https://www.brewersassociation.org/statistics/economic-impact-data/.

Webber, D., & Ehrenberg, R. (2010). Do expenditures other than instructional expenditures affect graduation and persistence rates in American higher education? *Economics of Education Review,* 29(6), 947-958.

Wechsler, H., Dowdall, G.W., Maenner, G., Gledhill-Hoyt, J., & Lee, H. (1998). Changes in binge drinking and related problems among American college students between 1993 and 1997. Results of the Harvard School of Public Health Alcohol Study. *Journal of American College Health*, 47(2), 57-68.

White, S., & Nitkin, M. (2014). Creating a transformational learning experience: Immersing students in a intensive interdisciplinary learning environment, *International Journal for the Scholarship of Teaching and Learning,* 8(2), 1-30.

Wrye, B., & Pruitt, C. (2017). Perceptions of binge drinking as problematic among college students. *Journal of Alcohol and Drug Education,* 61(1), 71-90.

Yin, R. (2012). A very brief refresher on the case study method. *Applications of Case Study Research,* 34, 3-20.

Appendix A
Administrator and Student Interview Protocol

Administrator Interview Protocol

Date/Time/Location:
Interviewer:

Introduction

You have been selected to speak with me today because you have been identified as someone who has a great deal to share about Innovation Brew Works. My research project as a whole focuses generally on what can be learned from country's first university-owned brewery and brewpub. More specifically, I have interest in the decision making process to open a brewery and brewpub on campus, the impact on the campus community, and its contributions to the academic mission, if any.

Interviewee Background

1. What is your current position at Cal Poly Pomona?
2. How long have you been in that position?
3. Have you held other positions at Cal Poly Pomona?
4. Can you tell me a little bit about your background and what let you to hold your current role?
5. Can you tell me how you have been involved with Innovation Brew Works?

Ethical Questions

1. Do you feel like alcohol use on college campuses is a problem in this country? Why or why not?
2. Given some of the documented negative consequences of drinking on college campuses, what is your understanding of how the decision was reached to create an on-campus brewery and brewpub?
3. What ethical considerations, if any, were given in the discussion to create an on-campus brewery and brewpub?
4. Do you think there is a risk of sending students mixed messages regarding alcohol consumption by having a brewery and brewpub on campus? Why or why not?
5. Do you feel like the creation of Innovation Brew Works has had an impact on the narrative surrounding alcohol consumption on campus? Why or why not?
6. Could there have been an alternative in creating Innovation Brew Works? Why do you think a brewery was chosen to create?

Campus Environment

1. How has the brewery and brewpub contributed to the on-campus environment for students?
2. How do you think students view Innovation Brew Works? For instance, do they see it as an amenity, and academic building, a combination? What makes you feel that way?

3. Do you think there is any risk in how Innovation Brew Works is marketed to current students? Why or why not? What about future students? Why or why not?

Experiential Learning/Value

1. In your own words, how would you define or describe the mission of Innovation Brew Works?
2. How has the brewery and brewpub contributed to the academic mission on campus?
3. What do you believe is the value of having Innovation Brew Works on the Cal Poly Pomona campus?
4. From your understanding, how would students describe their experiences working at Innovation Brew Works?
5. How do you think Innovation Brew Works might evolve over time?

Miscellaneous

1. Is there anything else you would like to share about Innovation Brew Works?

This concludes today's interview. Upon transcribing today's interview, I will send a copy to you to check for accuracy. This will help me ensure the validity of the data collected. I sincerely thank you for your time today and appreciate your willingness to participate in this study.

Student Interview Protocol

Date/Time/Location:
Interviewer:

Introduction
You have been selected to speak with me today because you have been identified as someone who has a great deal to share about Innovation Brew Works. My research project as a whole focuses generally on what can be learned from country's first university-owned brewery and brewpub. More specifically, I have interest in the decision making process to open a brewery and brewpub on campus, the impact on the campus community, and its contributions to the academic mission, if any.

Interviewee Background

1. Are you currently a student at Cal Poly Pomona?
2. How long have you been a student at Cal Poly Pomona?
3. When do you hope to graduate from Cal Poly Pomona?
4. What is your area of study?
5. Can you tell me how you have been involved with Innovation Brew Works?

Ethical Questions

1. Do you feel like alcohol use on college campuses is a problem in this country? Why or why not?
2. Do you think there is a risk of sending students mixed messages regarding alcohol consumption by having a brewery and brewpub on campus? Why or why not?
3. Do you feel like the creation of Innovation Brew Works has had an impact on the narrative surrounding alcohol consumption on campus? Why or why not?
4. Could there have been an alternative in creating Innovation Brew Works? Why do you think a brewery was chosen to create?

Campus Environment

1. How has the brewery and brewpub contributed to the on-campus environment for students?
2. How do you think students view Innovation Brew Works? For instance, do they see it as an amenity, and academic building, a combination? What makes you feel that way?
3. Do you think there is any risk in how Innovation Brew Works is marketed to current students? Why or why not? What about future students? Why or why not?

Experiential Learning/Value

1. In your own words, how would you define or describe the mission of Innovation Brew Works?
2. How has the brewery and brewpub contributed to the academic mission on campus?
3. What do you believe is the value of having Innovation Brew Works on the Cal Poly Pomona campus?

4. From your understanding, how would you describe your experiences working at Innovation Brew Works?
5. How do you think Innovation Brew Works might evolve over time?
6. Do you feel like your experience at Innovation Brew Works has better prepared you for future employment? Why or why not?
7. What skills do you feel like you have developed as a result of your experience at Innovation Brew Works?
8. Do you feel like those skills could have been developed in another setting? Why or why not?

Miscellaneous

9. Is there anything else you would like to share about Innovation Brew Works?

This concludes today's interview. Upon transcribing today's interview, I will send a copy to you to check for accuracy. This will help me ensure the validity of the data collected. I sincerely thank you for your time today and appreciate your willingness to participate in this study.

Appendix B
Interviewee Information

1. Godfrey, Michael, Associate Dean, The Collins College of Hospitality Management, California State Polytechnic University, Pomona
2. Ashton, Charlene, Associate Director, College of the Extended University, California State Polytechnic University, Pomona
3. Bassett, Eric, Brewmaster & Former Student, Innovation Brew Works & Instructor, College of Extended University
4. Young, Melody, Brewery & Brewpub Manager, Innovation Brew Works, Cal Poly Pomona Foundation
5. Neilson, Aaron, Dining Services Director, Cal Poly Pomona Foundation
6. Storey, Paul, Executive Director, Retired, Cal Poly Pomona Foundation
7. Dargan, Benardo, Interim Associate Vice President & Dean of Students, California State Polytechnic University, Pomona
8. Williams, Owen, Lecturer, Collins College of Hospitality Management, California State Polytechnic University, Pomona
9. Sidener-Mercado, Belisaria, Manager & Former Student, Cal Poly Pomona Foundation
10. Ortiz, Michael, President Emeritus, Cal Poly Pomona
11. Student, Current, California State Polytechnic University, Pomona
12. Student, Current, California State Polytechnic University, Pomona

Appendix C
Informed Consent

Higher Education Doctoral Program
Gillham Hall, Suite 1000
Toledo, OH 43606
419.383.5651

ADULT RESEARCH SUBJECT - INFORMED CONSENT FORM
What Can be Learned from the Country's First University-Owned Brewery and Brewpub?

Key Information:

- You are being invited to participate in a research study
- The purpose of the study is to understand what can be learned from the country's first university-owned brewery and brewpub.
- This research will take place at California Polytechnic State University Pomona in Pomona, California and will consist of semi-structured interviews, and will take approximately 1 hour.
- There are potential risks, including loss of confidentiality.
- You may benefit from your participation in this research by helping to identify and understand what can be learned from the country's first university-owned brewery and brewpub.
- Your participation in this research is voluntary

Principal Investigator: Debra Harmening, PhD, Associate Professor, Higher Education, 419.530.4375

Other Investigators: David Kubacki, PhD Student, Higher Education, 419.383.5651

Purpose: You are invited to participate in the research project entitled What can be Learned from the Country's First University-Owned Brewery and Brewpub? which is being conducted at California Polytechnic State University-Pomona (Cal Poly Pomona) in Pomona, California, under the direction of Principal Investigator, Debra Harmening and Co-Investigator, David Kubacki. The purpose of this study is to understand what can be learned from the country's first university-owned brewery and brewpub. More specifically, this study hopes to get an understanding of the decision making process to create a brewery and brewpub on campus, given the challenging relationship between alcohol and higher education. Additionally, this study hopes to better understand how the

brewery and brewpub has impacted the campus community and also contributions to the academic mission through experiential learning opportunities.

Description of Procedures: This research study will take place on the campus of Cal Poly Pomona, located in Pomona, California. You are being asked to participate in an interview for this qualitative study. The requested interview should take approximately 1 hour or less.

To ensure accuracy of this study, I would like to audio record our interview. Will you permit the researcher to audio record our interview?

YES ☐ NO ☐

_____ _____

Initial Here Initial Here

Once your interview is transcribed, you will be electronically sent the transcription to review for accuracy. While this will be an opportunity to review the transcript for accuracy, it will not be an opportunity to revise content. You will be given a timeframe to confirm accuracy of the transcription. If confirmation is not received by that date, investigators will assume the record is accurate.

Potential Risks: There are potential risks associated with this study, specifically the potential loss of confidentiality.

Potential Benefits: The only direct benefit to you if you participate in this research may be that you will learn about how social science studies are conducted and you may learn more about what can be learned from the country's first university-owned brewery and brewpub. The field of higher education may benefit from this research by describing what can be learned from the country's first university-owned brewery and brewpub. Additionally, higher education may benefit from this research by providing an understanding of the ethical decision-making process in higher education. Lastly, the proposed research may potentially highlight the need for universities to focus on the employability of its students. Others may benefit by learning about the results of this research.

Confidentiality: Consent documents will be signed in person. Those original copies will be stored in a locked file cabinet at the University of Toledo, Ruppert Health Center, room 1615. Signed consent documents will be kept for at least three years after the project has been closed. Audio will be recorded on a personal Olympus digital audio recorder. Transcribed audio files will be stored on a Microsoft Surface. Interview transcription files will be password protected.

With your permission, the information that is collected from your participation in this research may be used in future research studies without your consent, but only after your identifying information has been removed from the information. If you do not grant permission for your data to be de-identified and used for future research purposes, you **can** still participate in the research described in this document. Your agreement to this is voluntary and there are no consequences should you decline to allow your data to be used for future research purposes. Do you permit the researcher(s) to use and/or share your de-identified data for future research purposes?

YES ☐ Initial Here _____ NO ☐ Initial Here _____

Voluntary Participation: Your refusal to participate in this study will involve no penalty or loss of benefits to which you are otherwise entitled and will not affect your relationship with The University of Toledo, Cal Poly Pomona, or any of your classes or employment. You may skip any questions that you may be uncomfortable answering. In addition, you may discontinue participation at any time without any penalty or loss of benefits.

Contact Information: If you have any questions at any time before, during or after your participation {or experience any physical or psychological distress as a result of this research} you should contact Co-Investigator David Kubacki by phone at 419.383.5651 or by e-mail at david.kubacki@utoledo.edu. Principal Investigator, Debra Harmening, can be contacted by phone at 419.530.4375 or by e-mail at Debra.Harmening@utoledo.edu.

If you have questions beyond those answered by the research team or your rights as a research subject or research-related injuries, the Chairperson of the SBE Institutional Review Board may be contacted through the Human Research Protection Program on the main campus at (419) 530-6167.

SIGNATURE SECTION – Please read carefully

You are making a decision whether or not to participate in this research study. Your signature indicates that you have read the information provided above, you have had all your questions answered, and you have decided to take part in this research. You may take as much time as necessary to think it over.

By participating in this research, you confirm that you are at least 18 years old.

Name of Subject (please print)	Signature	Date
Name of Person Obtaining Consent	Signature	Date